

**MoDOT**

Research, Development and Technology

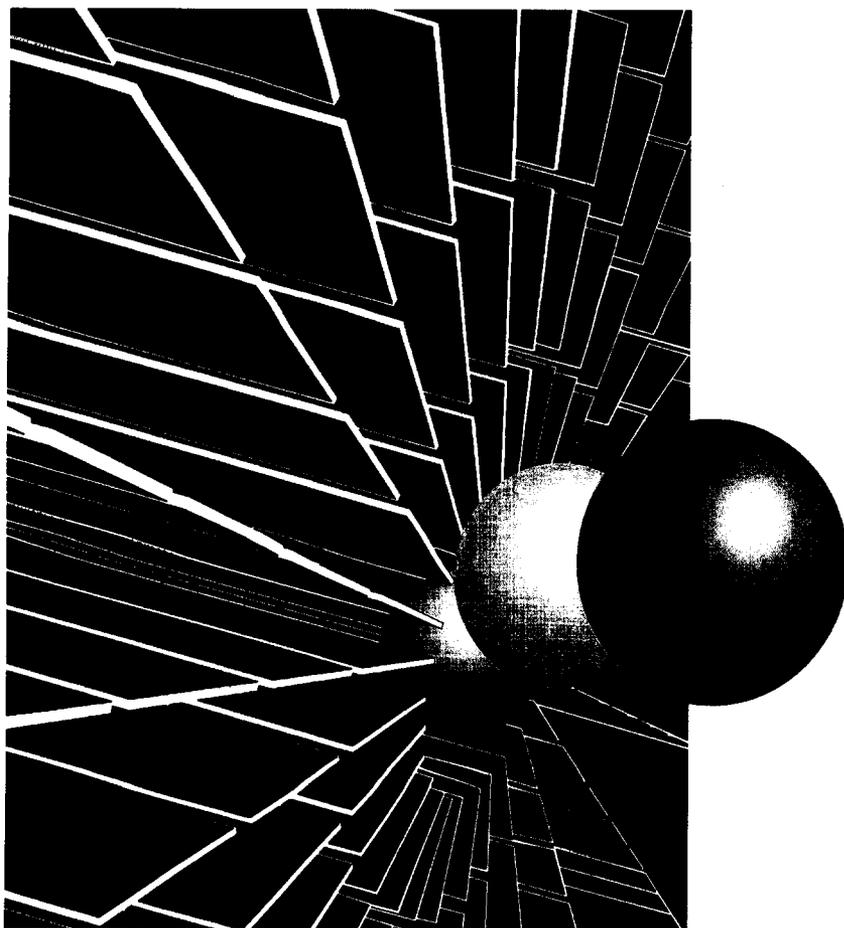
---

University of Missouri-Columbia  
Department of Rural Sociology

RDT 99-011

# Constituent Service Quality Survey

RI 97-034



January, 2000

# **FINAL REPORT**

Research, Development and Technology 99-011

## **CONSTITUENT SERVICE QUALITY SURVEY**

MISSOURI DEPARTMENT OF TRANSPORTATION  
Research, Development and Technology Division

BY:

J. Sanford Rikoon, Ph.D.

Kenneth E. Pigg, Ph.D.

Pierrette Bentivegna, MPH

Department of Rural Sociology  
University of Missouri-Columbia

JEFFERSON CITY, MISSOURI  
DATE SUBMITTED: FEBRUARY 4, 2000

The opinions, findings, and conclusions expressed in this publication are those of the principal investigators and the Research, Development and Technology Division of the Missouri Department of Transportation.

They are not necessarily those of the U.S. Department of Transportation, Federal Highway Administration. This report does not constitute a standard or regulation.

**TECHNICAL REPORT DOCUMENTATION PAGE**

1. Report No. RDT 99-011		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Constituent Service Quality Survey				5. Report Date February 2000	
				6. Performing Organization Code	
7. Author(s) J. Sanford Rikoon, Kenneth E. Pigg, and Pierrette Bentivegna				8. Performing Organization Report No.	
9. Performing Organization Name and Address University of Missouri-Columbia Department of Rural Sociology 102 Sociology Building Columbia, MO 65211-1100				10. Work Unit No. RDT 99-011/RI 97-034	
				11. Contract or Grant No.	
12. Sponsoring Agency Name and Address Missouri Department of Transportation (MoDOT) Research, Development and Technology Division P.O. Box 270 Jefferson City, MO 65102				13. Type of Report and Period Covered Final Report-May'99-Feb'00	
				14. Sponsoring Agency Code	
15. Supplementary Notes The investigation was conducted in cooperation with the U.S. Department of Transportation, Federal Highway Administration.					
16. Abstract In 1999, the University of Missouri-Columbia implemented the MoDOT Constituent Service Quality Survey (CSQS), collecting responses from 1,581 Missourians randomly sampled by telephone in three geographic regions (St. Louis, Kansas City, and Remainder of the State). The survey was intended primarily to provide a discrepancy analysis of the fit between citizen levels of current satisfaction with aspects of MoDOT's work and the amount of attention they believe the department should place on these same aspects in the future. The CSQS thus establishes a baseline of information to support current MoDOT planning efforts and to gauge future performance improvements.  The central findings of the research are as follows: (1) Missourians are generally satisfied with the performance of MoDOT and their transportation options, but generally want greater attention given to most areas of activity; (2) Areas identified as needing most improved performance are maintenance and preservation of bridges and existing roads, particularly pavement surfaces; use and distribution of funds; timeliness and speed of project planning; and, multi-modal options; (3) There are few differences between subgroups based on region, gender, or annual miles driven; middle-aged persons, as well as those with higher income and education, tended to express lower levels of satisfaction with MoDOT performance; and, (4) Missourians depend primarily on mass media outlets for information about the department. The findings suggest the challenges faced by MoDOT are both ones of management, public participation and education and ones of technological and substantive performance.					
17. Key Words customer satisfaction, performance management, service quality			18. Distribution Statement No restrictions. This document is available to the public through National Technical Information Center, Springfield, Virginia 22161		
19. Security Classification (of this report) Unclassified		20. Security Classification (of this page) Unclassified		21. No. of Pages	22. Price

## **Acknowledgements**

This research report would not have been possible without the support, advice and participation of a number of individuals and organizations. We would like to thank the members of the Missouri Department of Transportation CSQS Advisory Committee who contributed their time, knowledge and patience throughout the development and implementation of the survey and the preparation of the final report.

We would also like to thank all of those individuals and organizations who consented to an interview or otherwise provided us with information and understanding during the various phases of this research.

In addition, we gratefully acknowledge the assistance of faculty and staff of the Department of Rural Sociology at the University of Missouri-Columbia. We especially appreciate the contributions of Sue Allmart, Larry Dershem, Andy Raedeke, and Mara Schwartz for their expert help with the data analysis and report preparation.

# **Constituent Service Quality Survey**

## **Executive Summary**

Improving the performance of the Missouri Department of Transportation is a continuing effort of the department's personnel and the Missouri Highways and Transportation Commission. Several recent reports have highlighted MoDOT's need to closely monitor its performance and to obtain constituent evaluations of its work. In an effort to satisfy these suggestions, MoDOT expressed interest in collecting and analyzing baseline information regarding Missouri citizens' perceptions of the department's performance in maintaining and improving the transportation infrastructure in the State and in meeting constituent needs.

In 1998, the MoDOT Research, Development and Technology Division contracted with researchers at the University of Missouri-Columbia to develop an information baseline for gauging the perceptions and opinions of Missourians. This work focused on the level of current satisfaction with aspects of MoDOT's work and the amount of attention constituents believe MoDOT should place on these same aspects in the future. The research results were organized so that MoDOT management could clearly understand how constituents perceive the department's performance.

### **Performance Management in the Missouri Department of Transportation**

Planning for improvements to MoDOT's performance and management began in earnest several years ago. New operational and resource management plans have already been announced. Planning procedures are being established to support continuing performance management efforts, including the creation of baseline information and performance targets and standards. Such procedures will help MoDOT meet the Missouri General Assembly's requirements (established in 1998) for annual performance reviews and demonstration of performance improvement.

The Constituent Service Quality Survey (CSQS) is intended to help fulfill MoDOT's need for establishing a baseline to support current planning efforts and from which future performance improvements can be documented. The core of the CSQS is use of a discrepancy model, a basic measure broadly used in government performance improvement efforts. The model is comprised of two central elements: (1) measures of current levels of constituent satisfaction with various aspects of MoDOT work, and (2) measures of future levels of attention constituents believe ought to be given to the same performance aspects. Discrepancy levels are determined by comparing current satisfaction and future attention levels for each measured item. The derived discrepancy scores can then be arrayed on a performance matrix from positive (i.e., satisfaction levels higher than future attention levels) to negative (i.e., future attention levels higher than current satisfaction levels) scores. Management may thus view and compare relative evaluations of multiple items and identify the specific areas where MoDOT might focus future performance improvement efforts.

## Study Design

The research process was handled in two phases. Phase I was devoted to the development of a survey instrument. Phase II involved using this instrument to collect information via a telephone survey process, analyzing that data, and developing a final assessment report for use by MoDOT.

The survey developed in Phase I consisted of four primary sections: (1) ratings of satisfaction and future attention for forty-one performance areas of MoDOT work, (2) demographics of respondents, (3) general questions regarding MoDOT's overall performance and constituents' preferences for future resource allocation, and (4) sources of information about transportation used by respondents, and the nature and extent of constituent contact with MoDOT personnel.

The survey was developed by conducting a review of professional and academic literature related to customer satisfaction (as it applies to transportation management), a review of similar efforts in other states, and interviews with MoDOT stakeholders, both internal and external. MoDOT appointed a project committee to work with the research staff in survey development. Phase I was completed in March, 1999 with a completed instrument to be used in a telephone survey. Phase II began in June, 1999.

## Research Methodology and Sample

The survey was designed and analyzed by the Department of Rural Sociology at the University of Missouri – Columbia (UM-C). Beginning in June, 1999, the Center for Advanced Social Research (UM-C) implemented a telephone survey using a random digit dialing system. CASR completed 1,581 usable surveys. The overall response rate was 48 percent. Of the statewide total, 605 surveys were from the *St. Louis* region (Franklin, Jefferson, St. Charles, and St. Louis counties, and St. Louis city); 334 surveys were from the *Kansas City* region (Cass, Clay, Jackson, Platte, and Ray counties), and 642 were from the 105 remaining counties that constitute the *Remainder of the State* region. Statewide and regional sample sizes are large enough to ensure a sampling error of no more than plus or minus 2.9 percent at a 95 percent level of confidence.

The MoDOT statewide sample is largely representative of Missouri as a whole and deviates from the overall state population only in minor ways. The research sample is more male (54.7 percent) than female (45.3 percent), whereas the state population is slightly more female. The statewide sample contains representative proportions of middle-aged persons (40-59 years of age) but slightly under-represents younger ages and over-represents older persons. The response sample is in line with "middle" education groups (e.g., completed high school), but under-represents groups who either did not complete high school or have earned a post-graduate or professional degree.

## Analysis

The survey data were subjected to both univariate and bivariate analyses. Interviewees rated satisfaction and future attention opinions on 41 performance items using a four-point Likert

scale. Subgroup comparisons were used to identify significant differences in mean scores and in distributions of responses. Cases are reported as statistically “significant” only where the level of statistical significance is .01 or greater.

Most survey items were subjected to comparative analysis based on the three geographic regions, gender, age (18-39, 40-59, and 60 and older), education (high school diploma or less, and some college or more), income (1998 household annual income of less than \$20,000, \$20,000-\$49,999, \$50,000 or more), annual miles driven (less than 10,000, 10,000-19,999, 20,000 or more), and whether or not respondents had a commercial driving license.

## *Findings*

### **Finding 1: Missourians are generally satisfied with the performance level of MoDOT and their transportation options.**

- A majority of respondents were either “satisfied” or “very satisfied” with 29 of the 41 MoDOT performance items evaluated through the survey. At least 60 percent gave ratings at these levels to 20 performance items, and more than 70 percent were “satisfied” or “very satisfied” with 11 of the performance items.
- Mean overall satisfaction with MoDOT is 2.67 on a scale of 1=very dissatisfied to 4=very satisfied. Mean overall satisfaction with transportation options is 2.84 on the same scale.

### **Finding 2: Although generally satisfied with current performance levels, Missourians generally want greater attention given to all performance areas of MoDOT activity.**

- A majority of respondents expressed desire for “more” or “a lot more” future attention to 40 of the 41 MoDOT performance items evaluated through the survey. At least 60 percent gave ratings at these levels to 34 performance items, and more than 70 percent want to see “more” or “a lot more” attention given to 29 of the performance items.

### **Finding 3: Missourians cite large-scale maintenance and preservation of existing roads and bridges as areas for improving department performance.**

- Large-scale repair and maintenance performance items (e.g., providing pavement that lasts a long time) received high negative discrepancy scores relative to other measured areas of performance.
- Statewide, constituents would devote 60 percent of MoDOT’s budget to preservation and maintenance and the remaining 40 percent to expansion and new construction.

### **Finding 4: Missourians cite MoDOT’s use and distribution of funds, as well as accountability, as areas for improving departmental performance.**

- Performance items related to effective use and equal distribution of public funds received high negative discrepancy scores relative to other measured areas of performance.

Distributing funds fairly to all areas of the state was the highest negative discrepancy for the Remainder of the State region.

**Finding 5: Missourians cite timeliness and speed of project planning and completion as areas for improving department performance.**

- The time needed to complete repair and maintenance projects on roads and bridges (e.g., repairing pavement surfaces promptly) received high negative discrepancy scores relative to other measured areas of performance.
- The overall time required to plan and to complete transportation projects in general are also identified by respondents as areas for performance improvement

**Finding 6: MoDOT constituents want greater attention given to a number of transportation issues beyond traditional highway planning, construction or maintenance.**

- These issues typically fall into a “multi-modal” category in MoDOT. Respondents expressed support for such items as bicycle and pedestrian pathways along roads, passenger rail, and light commuter rail. Seventy-five percent of respondents call for “more” or “a lot more” future attention to “providing transportation for those who do not or cannot drive.”

**Finding 7: There are very few regional differences in constituent perceptions.**

- The three regional samples were useful in assessing the extent to which respondents’ location in the state affected their perceptions. While differences were found between the St. Louis, Kansas City, and Remainder of State regions, only in a few cases were these differences statistically significant. In most areas of the survey results, the regions are far more similar than they are different.

**Finding 8: Among social and demographic groups, middle-aged persons (40-59), as well as individuals with higher household income and education, express greater levels of dissatisfaction with current MoDOT performance.**

- In terms of overall satisfaction, the mean score of middle-aged respondents (2.58) was significantly lower than for younger (2.72) and older (2.78) respondents. The mean score of individuals with at least some college education (2.56) was significantly lower than that of persons with no college (2.76). Mean scores descend from the lowest income group (2.78) to highest income group (2.59).
- Similar patterns emerge in ratings of satisfaction with the 41 individual performance items. Middle-aged persons cited significantly lower satisfaction scores than younger-aged constituents on 10 items, and significantly lower satisfaction scores than older-aged respondents on 11 items. Individuals with at least some college education cited significantly lower satisfaction scores than constituents with no college experience on 19 items. Respondents in the highest annual household income category (>\$50,000) cited

significantly lower satisfaction scores than individuals in the lowest income category (<\$20,000) on 16 items.

**Finding 9: The level and nature of transportation use, measured by the annual mileage driven and whether the respondent had a driver’s license or was a commercial driver, are not important factors influencing perceptions.**

- The nature and extent of use of the highway system was not a factor in understanding the source of perception differences. Survey respondents were asked if they possessed valid driver’s licenses, if they were commercial drivers, and how many miles they estimated they drive each year. In only a few cases were these factors responsible for significant differences in the results.

**Finding 10: Missourians depend primarily on mass media outlets for information about MoDOT.**

- Respondents identified their primary source of transportation information, and then two additional utilized sources. As first or primary sources, the largest percentages of respondents identified television (41.6 percent), newspapers (33.4 percent), and radio (16 percent). In terms of all three sources employed for information used, the largest percentages of respondents identified television (81.6 percent), newspapers (69.3 percent), and radio (50.3 percent).
- Missourians make much less frequent use of electronic or personal contacts with MoDOT. In terms of top three conduits, 4.7 percent of respondents use the Internet/WWW and 3.0 percent utilize telephone or fax opportunities.

## *Conclusions*

**Overall Conclusion 1: Constituent perceptions of MoDOT’s performance indicate generally high levels of satisfaction but also a desire for improvement in many aspects of the department’s work.**

- Even while survey respondents are satisfied with most aspects of MoDOT’s work, they want more improvements in performance. One could conclude that respondents are satisfied, but not content. MoDOT’s current efforts to improve performance are very timely in this regard.
- About 12 of the 40 items included in the discrepancy analysis were considered to be “concerns” for MoDOT and deserve concerted efforts to improve performance. At the same time, the remaining 29 items were considered to be “strengths” of current performance, even when respondents felt the department should give these items more future attention. Determining how to maintain areas of strength while finding resources to improve performance in the other areas will be a significant challenge for MoDOT.

**Overall Conclusion 2: In terms of transportation infrastructure work, issues related to pavement surfaces remain a primary performance challenge for MoDOT.**

- On a statewide basis, three of the top four negative discrepancies were providing pavement that lasts a long time, maintaining the pavement so it provides a smooth ride, and repairing pavement surfaces promptly.

**Overall Conclusion 3: The challenges faced by MoDOT are issues of management, public participation and education as much as ones of technological or material performance.**

- Missouri constituent concerns focus on issues of planning, process, and pace, as well as on the substantive quality of existing components of the transportation system itself.
- Missouri constituent concerns emphasize the allocation and distribution of resources as well as the quality of the work performed with existing resources.
- Improving public perception of MoDOT performance requires emphasis on public education efforts, increasing civic participation in public processes, and pursuing management decisions that lead to greater allocation of resources to areas where the public perceives the greatest discrepancy between current satisfaction and future attention.

## Table of Contents

<b>Chapter 1 : Missouri Department of Transportation Constituent Service Quality Survey.....</b>	<b>1</b>
1.1 Context for Survey Design: Missouri Transportation Issues .....	1
1.2 Statewide Survey of Constituent Satisfaction with Service Quality. ....	2
1.3 Developing the Survey Instrument.....	3
1.4 Report Outline .....	5
<b>Chapter 2 : Study Methodology and Data Presentation .....</b>	<b>7</b>
2.1 Research Sampling Design.....	7
2.2 Survey Implementation .....	8
2.3 Descriptive Analysis and Significance Testing.....	9
2.4 Sample Subgroups.....	10
2.5 Summary .....	11
<b>Chapter 3 : Social, Demographic, and Transportation Characteristics of the MoDOT Survey     Sample.....</b>	<b>13</b>
3.1 General Demographic and Social Characteristics .....	13
3.2 Comparisons of MoDOT Survey Sample Characteristics with State Population .....	15
3.3 Respondent Transportation Characteristics .....	16
3.3.1 Miles Driven .....	16
3.3.2 Reasons for Travel.....	19
3.3.3 Commercial/Professional Driver .....	20
3.3.4 Special Transportation Needs Due to A Disability.....	22
3.3.5 Responsibility for Transporting Someone with a Disability.....	23
3.3.6 Driver’s License.....	24
3.4 Summary .....	24
<b>Chapter 4 : Findings of the Survey: Perceptions of MoDOT Performance .....</b>	<b>26</b>
4.1 Overall Satisfaction .....	26
4.2 Current Satisfaction with Aspects of MoDOT’s Transportation Work.....	30
4.3 Future Attention .....	37
<b>Chapter 5 : Analyzing Discrepancies to Guide Performance Management .....</b>	<b>44</b>
5.1 Discrepancy Analysis .....	44
5.2 Discrepancy Analysis of MoDOT Data .....	46
5.2 Summary .....	54
<b>Chapter 6 : MoDOT Performance Issues .....</b>	<b>56</b>
6.1 Preservation versus Expansion.....	56
6.2 Information Sources on MoDOT .....	59
6.3 Contacting MoDOT.....	63
6.4 Summary .....	66
<b>Chapter 7 : Reference Appendix .....</b>	<b>68</b>

## List of Figures

Figure 1.1. Computation Method for Discrepancy Indicator .....	4
Figure 3.1: Miles Driven per Year by Percentage of Respondents .....	16
Figure 3.2: Miles Driven by Subgroup .....	18
Figure 3.3: Percentage of Respondents by Reason for Driving or Making Trips .....	19
Figure 3.4: Reasons for Making Trips by Region of the State.....	20
Figure 3.5: Characteristics of Respondents who are Commercial or Professional Drivers .....	21
Figure 3.6: Characteristics of Respondents with Special Transportation Needs (Percentage of Total Sample).....	22
Figure 3.7: Characteristics of Respondents Providing Transportation for Someone with Special Transportation Needs (Percentage of Total Sample) .....	23
Figure 3.8: Characteristics of Those with Valid Driver's Licenses (Percentage within Each Subgroup).....	25
Figure 4.1: Overall Satisfaction with MoDOT and Transportation Options, by Total Sample .....	27
Figure 4.2: Subgroup Mean Scores of Overall Satisfaction with Transportation Options .....	28
Figure 5.1: Analytical Framework for Understanding Discrepancy Scores .....	45
Figure 5.2: Mean Discrepancies between Current Satisfaction and Future Attention - Statewide .....	50
Figure 5.3: Plot of Discrepancies between Current Satisfaction and Future Attention - Statewide ....	51
Figure 5.4: Enhanced Plot of Discrepancies between Current Satisfaction and Future Attention - Statewide.....	52
Figure 6.1: Statewide and Regional Preferences on MoDOT Budget Percentage for Preservation ....	57
Figure 6.2: Subgroup Preferences for Division of MoDOT Budget for Preservation or Expansion ...	58
Figure 6.3: Respondent Satisfaction with MoDOT Responses to Citizen Contacts .....	65
Figure 7.1: Mean Discrepancies between Current Satisfaction and Future Attention - Kansas City Region .....	92
Figure 7.2: Mean Discrepancies between Current Satisfaction and Future Attention - St. Louis Region .....	93
Figure 7.3: Mean Discrepancies between Current Satisfaction and Future Attention – Remainder of the State Region .....	94
Figure 7.4: Relative Plotting Current Satisfaction and Future Attention - Kansas City Region.....	95
Figure 7.5: Enhanced Plotting Current Satisfaction and Future Attention - Kansas City Region .....	96
Figure 7.6: Relative Plotting Current Satisfaction and Future Attention - St. Louis Area Region.....	97
Figure 7.7: Enhanced Plotting Current Satisfaction and Future Attention - St. Louis Region .....	98
Figure 7.8: Relative Plotting Current Satisfaction and Future Attention - Remainder of the State Region .....	99
Figure 7.9: Enhanced Plotting Current Satisfaction and Future Attention - Remainder of the State Region .....	100

## List of Tables

Table 1.1: Listing of 41 Items Included in the Survey.....	6
Table 2.1: Sample Design .....	7
Table 2.2: Composition of Subgroups .....	11
Table 3.1: Social and Demographic Characteristics of the Survey Sample.....	14
Table 3.2: Comparisons of Missouri Census Data and MoDOT Survey Sample .....	16
Table 3.3: Comparison of Miles Driven per Year by Region .....	17
Table 4.1: Statewide Frequencies of Overall Satisfaction, by Miles Driven .....	29
Table 4.2: Ranking of Mean Level of Current Satisfaction Statewide and by Region .....	32
Table 4.3: Percentage of Respondents Indicating “Satisfied” or “Extremely Satisfied” with Current MoDOT Performance Statewide and by Region .....	35
Table 4.4 Ranking of Mean Level of Future Attention Statewide and by Region.....	39
Table 4.5: Percentage of Survey Respondents Indicating a Desire for “More” or “A lot More” Future Attention on Performance Items.....	42
Table 5.1: Ranking of Discrepancy between Current Satisfaction and Future Attention Statewide and by Region .....	47
Table 6.1: Allocation of MoDOT Resources to Preservation vs. Expansion by Subgroup .....	59
Table 6.2: Sources of Information on MoDOT – Statewide and by Region.....	60
Table 6.3: Primary Sources of Information on MoDOT by Subgroup .....	62
Table 6.4: Reasons for Contacting MoDOT – Statewide and by Region .....	64
Table 7.1: List of CSQS Advisory Committee Members .....	69
Table 7.2: Listing of Stakeholder Organizations Interviewed .....	70
Table 7.3: Summary of Data on Each of the 41 Performance Items.....	71
Table 7.4: Summary of Significant Differences in Current Satisfaction by Performance Item for Each Subgroup.....	83
Table 7.5: Summary of Significant Differences for Future Attention by Performance Item for Each Subgroup.....	86
Table 7.6: Summary of Significant Discrepancy Differences by Performance Item for Each Subgroup.....	89

## **Chapter 1: Missouri Department of Transportation Constituent Service Quality Survey**

Acquiring reliable citizen input for decision making in state agencies is a continuing challenge, one compounded by recent administrative policies that require agencies also to measure and base decisions on “performance” of their programs. The level of citizen satisfaction with the services provided by state agencies is generally considered a useful supplement to other measures of agency performance. The Constituent Service Quality Survey (CSQS) was designed to provide this input for Missouri Department of Transportation (MoDOT) decision-makers.

### ***1.1 Context for Survey Design: Missouri Transportation Issues***

In July, 1997 the Missouri Total Transportation Commission (TTC) issued its report regarding the requirements for producing a first-class transportation system for Missouri. The TTC was formed to review MoDOT’s 15-Year Highway Plan, formulated in 1992. The TTC studied all modes of transportation, reviewed needs and funding sources and recommended a number of actions to increase agency accountability. Increased accountability recommendations included *improved evaluation and oversight* of its performance.<sup>1</sup> These improvements can be supported by assessing the level of taxpayers’ satisfaction with the quality of services provided and systematically gathering reliable data on taxpayer preferences for infrastructure management decisions.

Substantively, there are many issues facing the transportation sector. Many of these issues stem from the historic underinvestment in infrastructure maintenance and enhancement.<sup>2</sup> The result has been deteriorating roadways for public and commercial use, reduced access to rail transport, limitations on general aviation, new terminal infrastructure, and generally increasing costs to the public. These changes have obvious implications for economic and community development and for public safety. There are also important implications in taxpayer perceptions of the quality of MoDOT management of this

---

<sup>1</sup> Italics added for emphasis. Also included in the recommendations were changes in the manner in which highway improvements are funded, better cost controls implemented within MoDOT, and detailed base budget reviews conducted annually.

<sup>2</sup> Oak Ridge National Laboratory, Transportation Energy Data: Edition 13. As quoted in State Government News, 37-3 (March, 1994): p. 29.

infrastructure. Hartgen and Krauss indicate that the taxpayer's viewpoint is comprised of their perceptions regarding three questions: "(a) what resources were provided (receipts)? (b) how were these resources spent (disbursements)? And (c) what was the result (system performance)?"<sup>3</sup> Most recent references to "reinventing government" and performance measurement in the public sector acknowledge the importance of monitoring taxpayer perceptions.

Citizen input can provide useful measures of satisfaction with agency performance in delivery of services that, when combined with other measures of performance (such as annual percent dilapidated bridges repaired or reconstructed), can help establish public accountability for transportation officials. Citizen input that reflects taxpayer perceptions of needs and priorities regarding public investment decisions in transportation is also useful to help guide agency personnel in meeting their management responsibilities.

### ***1.2 Statewide Survey of Constituent Satisfaction with Service Quality.***

In order to gauge public needs, values, and perceptions on MoDOT performance items and other variables related to transportation in Missouri, the agency contracted with the University of Missouri-Columbia (UM-C) to undertake a statewide survey of Missouri taxpayers.<sup>4</sup> After consultation with MoDOT staff, the existing agency goals proved inadequate for measuring performance and a decision was made to use a discrepancy analysis approach to service quality assessment. The discrepancy analysis approach is recognized in the strategic planning literature as a general approach to determining discrepancies between desired and actual levels of performance.<sup>5</sup> In the case of MoDOT constituents, the focus is on measuring perceived levels of satisfaction with present performance and expectations regarding future attention on specific performance aspects of MoDOT's work.

---

<sup>3</sup> Hartgen, D.T. & Kraus, R.T. 1993. "Resources versus Results: Comparative Performance of State Highway Systems, 1984-1990." *Policy Studies Journal*, 21-2: pp 357-374. (See critical response by Goode, L., Jeff, G., MacGillivray, I. & Pedersen, N. 1993. "Response to 'Resources vs. Results: Comparative Performance of State Highway Systems, 1984-90.'" *Policy Studies Journal*. 21-2: 375-78.)

<sup>4</sup> For the purposes of this proposal, the initial definition of MoDOT "constituent" will be the taxpayer and the terms "customer," "citizen," "taxpayer," and "constituent" are used interchangeably. Operationally, this will mean the respondent definition is based on "households" (as telephone surveys can be most efficiently conducted using random digit dialing of telephone exchanges in Missouri that are tied to households rather than individuals.)

<sup>5</sup> Goodstein, et. al, 1993. *Applied Strategic Planning: A Comprehensive Guide*. New York: McGraw-Hill Publications.

The discrepancy analysis approach to obtaining information about customer satisfaction with services is also represented in the “service quality” literature<sup>6</sup>. The service quality approach generally defines “quality” of service delivered by a public agency as consisting of:

- Tangibles—appearance of physical facilities, equipment, communication materials, etc.;
- Reliability—ability to perform the promised service dependably and accurately;
- Responsiveness—willingness to help customers and to provide prompt service;
- Assurance—knowledge and courtesy of employees and their ability to convey trust and confidence; and,
- Empathy—caring and individualized attention the agency provides its customers.

The discrepancy approach measures both expectations and perceptions to determine where there are gaps relevant to agency performance. These include gaps (or discrepancies) such as the difference between constituents’ expectations and their perceptions of the service received. Over the long term, narrowing the gaps defined by these data provides important indicators of agency performance. These discrepancies represent useful benchmarks to help define areas of improvement in performance. The discrepancy analysis (i.e., “gap”) approach provides valuable short-term feedback to MoDOT that is useful and reliable.

### ***1.3 Developing the Survey Instrument***

Initially, discussions were held with MoDOT representatives who formed the CSQS Advisory Committee for this study. This committee is comprised on representatives from various units within MoDOT including: district offices; general headquarters; public affairs; planning; and research development and technology. *Table 7.1* in the Reference Appendix provides a listing of the committee members. With the assistance of this group, specific performance areas were identified for assessment that correspond to the work performed and decisions made by MoDOT. These areas were used as the basic measures of agency performance. When combined with a four-point scale that asked respondents to rate their level of satisfaction with MoDOT performance in these areas (from “extremely satisfied” to “extremely dissatisfied”), the data collected can be used as reliable indicators for measuring

---

<sup>6</sup> Parasuraman, A., Berry, L. and V. Zeithaml (1991). “Refinement and Reassessment of the SERVQUAL Scale.” *Journal of Retailing*, Winter: 420-450.

perceived performance. The same items were used in the survey instrument in a second section (with the same four-point scale) asking respondents to indicate the level of attention they felt MoDOT should assign these areas in the future. The discrepancy indicators are computed by subtracting the scale scores assigned by each respondent for current satisfaction and future priority as indicated in *Figure 1.1*.

**Figure 1.1. Computation Method for Discrepancy Indicator**

$$\text{DISCREPANCY} = \begin{array}{l} \text{(Level of current satisfaction in area)} \\ \text{—} \\ \text{(Level of future priority to assign to area)} \end{array}$$

These 41 areas are listed in *Table 1.1* and include items related to safety, maintenance, new construction, multi-modal issues, and management of resources. An additional listing is also located on the inside of the back cover for easy reference.

Several sources provided additional measures for inclusion in the draft instrument. First, similar studies conducted by the U.S. DOT and several state departments in recent years were reviewed. This comprehensive review provided additional measures that the CSQS Advisory Committee felt were relevant to the Missouri study. The review also confirmed that the use of the discrepancy approach was considered by other states to be a desirable approach. Another source of information was a series of key stakeholder interviews conducted by the research team. The CSQS Advisory Committee MoDOT identified 26 stakeholders representing various interested parties in the state including, public transportation services, community governments, emergency service providers, planning and development councils, and state legislators (see *Table 7.2* in the Reference Appendix). Successful face-to-face interviews were conducted with 20 of these individuals and information was obtained about many “issues” the stakeholders felt should be addressed by the study. Many stakeholders felt strongly that constituent perceptions of MoDOT’s management of its resources and planning and priority-setting procedures should be included in the study.

Information from these sources was assembled and a final draft instrument was reviewed with the CSQS Advisory Committee. Upon approval by this group, a test of the instrument was conducted to hone the questions and remove any items that were confusing

and to determine where item wording should be changed. Several minor changes were made and a number of items were deleted as the original draft required too much time to administer without exceeding budgetary constraints. The final instrument was approved by the CSQS Advisory Committee in March 1999.

#### ***1.4 Report Outline***

The following chapters in this report present the research methodology, survey respondents, and survey results and research findings. Chapter 2 provides an orientation to the data collection methodology as well as an introduction to the kinds of analyses and subgroup comparisons used throughout the data discussion. Chapter 3 presents data on various characteristics of the survey sample. The first sections examine respondent social and demographic characteristics. Later portions focus on transportation and driving habits of the sample, including such variables as annual miles driven, license types, and service usage. Chapter 4 presents respondent ratings of 41 MoDOT performance dimensions ranging from safety to the effective use of public funds. The focus in this chapter is on respondent ratings of satisfaction and their opinions about the level of future attention that various activities ought to receive. Chapter 5 presents the core discrepancy analysis. This discussion focuses on description and analysis of differences between respondent ratings of satisfaction and their opinions about future attention. Chapter 6 moves from the analysis of survey items to more integrated discussion of the implications of the survey data for MoDOT management and planning. Chapter sections also include analysis of selected respondent behavioral patterns that provide a useful context for planning future management efforts. This context includes respondent uses of sources of information, contacts with MoDOT, and attitudes towards resource allocation.

The Reference Appendix to this report includes additional information on the CSQS team, stakeholders consulted in Phase I of this project, and three types of tables: summary tables on the 41 performance items, composite portraits of subgroup differences on ratings of the 41 performance items, and discrepancy figures for three study geographic subregions.

A separate Data Appendix has also been prepared. This volume has three sections (A, B and C) containing the survey instrument, a complete set of statewide and subgroup results for survey variables, additional data on subgroup responses to the 41 performance

variables, and figures showing responses to the 41 performance variables by regional subgroups. This separate Appendix is available upon request.

**Table 1.1: Listing of 41 Items Included in the Survey**

Item #	Item
1	Placing orange construction signs to mark active work areas
2	Ensuring that traffic signals and lights are working
3	Marking railroad crossings
4	Providing rest area services and facilities that meet my needs
5	Placing yellow warning signs to assure sufficient response time
6	Providing a sufficient number of local / regional airports
7	Setting speed limits
8	Using electronic message boards to advise drivers of delays or construction areas
9	Providing lanes that are wide enough for safe driving
10	Having signs that can be easily seen at night or in bad weather
11	Building bridges that are wide enough to feel safe
12	Building bridges that last long enough
13	Mowing along roadways to improve the appearance of the roadway
14	Removing snow / ice efficiently
15	Communicating with the public in easy to understand language
16	Keeping roadsides free of litter and debris
17	Providing useful information about construction, repairs or road conditions
18	Striping center lines and road edges to ensure safety
19	Lighting interchanges and bridges
20	Providing a sufficient number of commuter parking spaces
21	Offering a toll free phone line that is useful
22	Providing sufficient passing opportunities on two-lane highways
23	Providing crosswalks and signals that allow you to cross the highway safely
24	Providing pavement markings that can be easily seen in wet weather
25	Building new highways to meet future demand
26	Treating highway surfaces to resist skidding in wet weather
27	Honoring commitments to provide and maintain Missouri's transportation system
28	Providing shoulders that are adequate to pull off the road safely
29	Providing sufficient transportation for those who don't or can't drive
30	Improving existing highways to meet increasing traffic demands
31	Providing Amtrak passenger rail service to meet your needs
32	Planning a project in a reasonable amount of time
33	Completing road and bridge construction and repairs in a timely manner
34	Providing the public with adequate opportunities for input in project planning
35	Distributing transportation funds fairly to all areas of the state
36	Using public funds in a cost effective manner
37	Providing pavement that lasts a long time
38	Maintaining the pavement so it provides a smooth ride
39	Repairing pavement surface promptly
40	Providing pedestrian / bicycle pathways on or adjacent to highways that are safe
41	Providing passenger light rail routes, such as Metro link (St. Louis)

## Chapter 2: Study Methodology and Data Presentation

This chapter presents information on the research design, sample, and collection methodology, as well as an introduction to the general types of analyses contained in this report. Data for this project were collected through telephone surveys of 1,581 randomly chosen telephone listings in three stratified geographic regions of the state.

### 2.1 Research Sampling Design

MoDOT representatives requested data on a statewide and regional basis, using a tripartite geographical division. The *St. Louis* region is comprised of four counties (Franklin, Jefferson, St. Charles, and St. Louis counties) and St. Louis City. The *Kansas City* region includes five counties (Cass, Clay, Jackson, Platte, and Ray counties). The *Remainder of the State* region includes the 105 Missouri counties not included in the two metro areas listed above.

The overall sample size was determined according to a binomial percentage distribution of 60/40 on a hypothetical dependent variable with a sampling error of plus or minus 2.9 percent at a 95 percent level of confidence. In essence, the goal was to maintain a maximum sampling error of plus or minus 3 percent for each region and the state as a whole. Using these criteria, and building in a modest statistical buffer, the goal was to collect 1600 interviews statewide, with proportional populations in each region reflective of that area's percentage of total state population of residents aged 18 years and above. *Table 2.1* shows the overall sampling design numbers and total usable surveys collected.

**Table 2.1: Sample Design**

	Kansas City	St. Louis	Remainder of the State	Total
Region Population Size	705,128	1,270,584	1,489,029	3,465,741
% of State Population	20	37	43	100
Proportional Sample Size	320	592	688	1,600
Completed and Usable Cases	334	605	642	1,581
% of Total Sample	21	38	41	100

## ***2.2 Survey Implementation***

Data collection was undertaken by the Center for Advanced Social Research (CASR), a division of the School of Journalism at UM-C specializing in telephone surveys. CASR selected respondents through use of a procedure called “list-assisted random-digit dialing.” This method efficiently takes advantage of the availability of large computer databases of telephone directory information. The random digit aspect of the sample selection avoids response bias and provides representation of both listed and unlisted numbers (including not-yet-listed). The design of the sample ensured this representation by random generation of the last two digits of telephone numbers selected on the basis of their area code, telephone exchange, and bank number. A working bank is defined as 100 contiguous telephone numbers containing three or more residential listings. Although this process takes longer because it does not exclude unused numbers, businesses, fax/modems, or other unusable listings, it is the most random of all approaches. Telephone numbers were generated by random selection within zip codes belonging to the three study regions.

CASR used the Trodahl-Carter-Bryant (T-C-B) respondent selection method to select eligible respondents from households randomly contacted for the study. The T-C-B method requires the interviewer to ask two questions shortly after the introductory statements, “How many adults aged 18 or over live in your household, including yourself?” and “How many of them are women/men?” Based on the answers to the two questions, the interviewer can objectively select the most appropriate respondent using the selection matrix that appears on the computer screen. The likelihood of within-sampling-unit non-coverage error is thus minimized because all eligible respondents in a household are equally considered by the selection method.

CASR enumerators made at least eight attempts to reach “ring, no answer” numbers before dropping that number from the sample list. The calls are scheduled over days of the week and times of the day to maximize the chances of making contact with a potential respondent. All refusals are contacted at least once in order to make an additional attempt to convert them to completed interviews.

The overwhelming majority of the data (1349 cases or 85 percent of the total sample) was collected in May and June, 1999, and the remaining cases were collected in September and October, 1999. Extensive significance testing between the two samples was conducted.

These yielded few statistical differences and demonstrated that the data sets could be combined for analysis.

Overall, the response rate was 47.4 percent. The total refusal rate among potential respondents amounted to just over half of those individuals contacted (53.6 percent) to participate in this survey. Given the topic and length of the survey, the response rate is normal and constitutes a sufficiently high percentage to maintain specified confidence intervals. The survey sample was compared to the state population as a whole to examine possible demographic and social biases, and these comparisons are reported in Chapter 3.

The final usable total sample includes 1,581 respondents with 334 interviewees from the Kansas City region, 605 respondents from the St. Louis region, and the remaining 642 interviewees from the Remainder of the State. While more than 1,600 surveys were initially completed, 24 had to be discarded due to incompleteness or conflict of interest (e.g., MoDOT employees). The total number of interviews, as well as the total number from each region, deviates no more than a maximum of two percent from the original respondent goals (*Table 2.1*). Given the initial “buffer” built into the original targeted survey numbers, the final statewide and region sample numbers satisfy statistical requirements that the data contain a less than +/- three percent sampling (or other random) error with a 95 percent confidence interval.

### ***2.3 Descriptive Analysis and Significance Testing***

Most of the data discussions in the following chapters include descriptive statistics on each survey item, especially mean scores and respondent percentages within categories. Where mean scores are presented, readers will typically find mention of the scale endpoints (e.g., “scale of 1-4”) and a descriptor of the value at each endpoint (e.g., “1=very dissatisfied, 4=very satisfied”). By far, the most commonly utilized scale in this research is a four-point Likert scale. For example, satisfaction levels are rated along the following points: 1=extremely dissatisfied, 2=dissatisfied, 3=satisfied, and 4=extremely satisfied. Similarly, ratings of future attention that ought to be devoted to various performance items are given as 1=much less, 2=less, 3=more, and 4=much more. With the use of 4-point scales, the mean score that would represent a mid-point of respondent evaluations (e.g., as dissatisfied/satisfied) is 2.5. The 4-point scale was used throughout the survey to ease

comparative research and to provide respondents (and readers) with an unambiguous ordinality of response categories.

The analysis of the MoDOT data includes both univariate and bivariate analysis. Univariate analysis focuses on examination of the distribution of cases on one variable at a time. In most cases, the format is solely one of frequency distributions of grouped data, e.g., percentage of respondents who answered “yes” or “no” to a particular question, or percentages of respondents selecting each point on an ordinal scale. The “mean” (or average response) is also reported on many items. Bivariate analysis is used for inferential analysis of subgroup comparisons (e.g., between sample regions). In making inter- or intra-group comparisons, only tests of statistical significance are considered. The most common procedure used in reporting the data is significance testing of mean scores between subgroups of the survey sample. Given the relatively large numbers of respondents, *only those instances where the level of significance is .01 or greater are reported as “significant”*. In essence, a designation of significant difference in this report denotes that the reported differences between groups will occur by chance or sampling error in only one of every 100 instances. The second test of significance used is that of chi square ( $X^2$ ) analysis, which examines the observed distribution of values on two separate variables and computes the conjoint distribution that would be expected if there were no relationship between the variables. Chi square analysis compares the expected and actual distribution of cases and determines the probability that any discovered discrepancies could have resulted from sampling error alone. As with means testing, only chi square analyses with a probability value (or p-value) of  $< .01$  are reported as significant.

#### **2.4 Sample Subgroups**

A major dimension of the analysis of the MoDOT data is subgroup analysis. In accordance with preferences communicated by the Constituent Service Quality Survey (CSQS) Advisory Committee, many survey items have been subjected to comparative analysis based on region, gender, age, education, income, annual miles driven, and possession of a commercial driving license. *Table 2.1* shows the composition of each subgroup and the basis of its derivation. Throughout this report, references to comparative analysis of any subgroup refer to the categories noted in this table. In the majority of cases, subgroup analysis is performed on the statewide or total sample (e.g., gender differences

statewide). At other times, subgroup analyses were carried out within specific regions (e.g., gender differences in the Kansas City region).

**Table 2.1: Composition of Subgroups**

Subgroup Category	Number (N)*	Basis of categorization
Region Kansas City St. Louis Remainder of the State	334 605 642	Zip code associated with telephone prefix. In cases where a prefix crossed regional lines, regional location was determined by the zip code's primary geographic location.
Gender Male Female	868 712	As noted by CASR interviewers
Age 18-39 years 40-59 years 60 years and older	497 642 419	Self-reported by respondents at time of their interviews. Ages were reported as continuous variable and categorized for analysis.
Education High school diploma or less At least some College	610 964	Self-reported by respondents at time of their interviews. Education levels were reported in seven categories (from "less than high school" to "advanced college degree") and categories were combined for analysis.
Income (Household Income in 1998) <\$20,000 \$20,000-\$49,999 \$50,000 or more	296 658 468	Self-reported by respondents at time of their interviews. Income levels were given in six categories (from "less than \$10,000" to "more than \$100,000") and categories were combined for analysis.
Miles driven (1998) <10,000 miles 10,000-19,999 >20,000 miles	531 560 487	Self-reported by respondents at time of their interviews. Miles driven were reported as continuous variable and categorized for analysis.
Commercial License Yes No	150 1430	Self-reported by respondents at time of their interviews.

\* The N for each category do not always total 1581 (total sample) due to missing/refusal responses. By subgroup, the missing/refusal Ns are as follows: gender (1); age (14), education (7), income (159), miles driven (3), and possession of a commercial license (1).

## 2.5 Summary

In summary, a systematic random telephone survey was implemented in June 1999. Trained enumerators collected 1,581 usable surveys, including 605 from the St. Louis region, 334 from the Kansas City region, and 642 from the Remainder of the State region. Statewide and regional sample sizes ensure a sampling error of no more than plus or minus 2.9 percent at a 95 percent level of confidence.

The survey data were subjected to both univariate and bivariate analyses. Comparative subgroup analysis involved testing for significant difference based on respondent geographic region, gender, age, education, 1998 household income, annual miles driven, and whether or not respondents had a commercial driving license. All references to statistically “significant” difference are cases where the level of statistical significance is .01 or greater.

## **Chapter 3: Social, Demographic, and Transportation Characteristics of the MoDOT Survey Sample**

This section describes general social, demographic, and transportation characteristics of the total MoDOT survey sample. The first section discusses basic demographic and social traits, the second portion compares the survey sample to the state population as a whole for a selected number of demographic indicators, and the final sections present information on the transportation characteristics, particularly items linked to driving habits.

### ***3.1 General Demographic and Social Characteristics***

The objective of this section is to describe some of the basic social and demographic characteristics of the statewide and regional samples. Overall, there are some minor variations between regions that mirror wider regional differences in the state (*Table 3.1*).

Respondents between 30 and 59 years of age account for about 60 percent of the respondent sample with those between 40 and 49 years comprising the largest single group in all three regions. There is very little difference between the St. Louis and Kansas City regions, but the Remainder of the State has the fewest respondents in the two youngest age categories (20-29 and 30-39) and the largest percentages in the highest age groups. This pattern likely reflects the growing numbers of retirees moving to non-metro regions as well as the internal migration of younger people from rural to metropolitan regions in search of educational and economic opportunities.

The overall respondent pool is nearly 55 percent male. St. Louis and the Remainder of the State are near this frequency while Kansas City has a more equal balance between males and females. The educational profile of the total sample includes about 40 percent with a high school education or less, approximately one-quarter with some college years, and the remaining 35 percent with a completed college education or an advanced degree. The primary inter-regional difference is the much higher percentage of Remainder of the State respondents (47.4 percent) whose education has not gone beyond high school and the lower percentage (29.7) of this group's members who have completed a college degree. This pattern reflects larger regional variations in the state, the higher ages of Remainder of the State respondents, and the greater opportunities for professional work in metropolitan areas.

Table 3.1: Social and Demographic Characteristics of the Survey Sample

	Kansas City (%)	St. Louis (%)	Remainder of the State (%)	Total (%)
<b>AGE</b>				
18-29 years	11.3	13.0	10.3	11.6
30-39 years	18.3	18.2	15.9	17.3
40-49 years	25.9	23.7	19.7	22.5
50-59 years	18.9	17.0	19.5	18.4
60-69 years	11.9	11.7	15.6	13.3
70 and more years	11.6	12.5	16.6	14.0
Average age	47.9 years	46.9 years	50.4 years	48.6 years
<b>GENDER</b>				
Male	51.2	56.2	55.6	54.9
Female	48.8	43.8	44.4	45.1
<b>EDUCATION</b>				
Less than HS Graduate	6.0	7.0	10.5	8.2
High School/GED	24.6	26.4	37.2	30.6
Some College/No Degree	28.7	26.1	22.0	25.1
College Graduate	26.3	24.6	17.9	22.4
Post Grad./ Prof. Bus School	14.1	15.6	11.8	13.8
<b>YEARS IN MISSOURI</b>				
<i>Less than 6 years</i>	9.7	6.3	6.7	7.2
6-20 years	18.5	16.9	14.7	16.7
21 or more years	71.8	76.8	77.6	76.1
<b>EMPLOYMENT STATUS</b>				
Full-time employed	56.0	55.2	48.1	52.7
Part-time employed	6.0	6.0	7.5	6.6
Self-employed	9.9	5.5	10.6	8.5
Unemployed	1.5	3.1	1.7	2.2
Retired	20.7	21.3	23.5	22.2
Student	1.8	4.3	2.0	2.9
Homemaker	1.8	1.7	3.7	2.5
Disabled	1.2	1.3	1.9	1.5
Other	0.9	0.8	0.8	0.8
<b>ANNUAL HOUSEHOLD INCOME (1998)</b>				
Less than \$10,000	6.9	6.9	9.1	7.8
\$10,000 - \$19,999	11.8	12.4	14.2	13.0
\$20,000 - \$29,999	16.8	18.9	19.9	18.8
\$30,000 - \$49,999	28.6	25.3	28.8	27.4
\$50,000 - \$99,999	27.6	26.8	23.6	25.7
More than \$100,000	8.2	9.7	4.5	7.2

The total sample shows little inter-state mobility, with more than three-quarters claiming residence in Missouri for more than 20 years. Kansas City respondents indicate the highest levels of mobility, but the inter-regional differences are not large.

The employment status of respondents reveals both the healthy economy of the late 1990s and the age profile of the group. Approximately two-thirds of respondents are employed, the overwhelming majority with full-time work. Self-employment is highest in the Remainder of the State. In reflection of the percentages of older respondents, retirement rates are above 20 percent in each region. Smaller regional differences exist (e.g., slightly higher percentages of unemployed in St. Louis or homemakers in the Remainder of the State), but these differences account for only very minor percentages of the overall groups.

Respondent income characteristics in many respects summarize the education and employment patterns noted above. The fact that nearly 53 percent of respondents' household income is above \$30,000 annually and almost half of these are above \$50,000 reflect the high levels of education and years in the workforce of employed persons. About 21 percent of respondents report less than \$20,000 of annual household income and 7.8 percent indicate less than \$10,000 income in 1998. The highest percentages of respondents in these latter groups are located in the Remainder of the State. This region also lags behind Kansas City and St. Louis in terms of numbers of respondents in the highest income categories. The percentage differences within income categories are often not significant, however, and there is more overlap than difference between the three geographically stratified regions.

### ***3.2 Comparisons of MoDOT Survey Sample Characteristics with State Population***

Differences between the MoDOT survey population and state population as a whole are minor. The MoDOT survey respondents are slightly older, more frequently male, and more educated (*Table 3.1*). In terms of ages, the MoDOT sample under-represents respondents in the two youngest age categories and over-represents people in the 50-59 age group. The MoDOT sample is about 55 percent male, whereas the state population as a whole is slightly more female. Finally, the survey sample contains far fewer respondents without a high school diploma than is characteristic of the state population as a whole. The two groups are similar in terms of high school graduates but the MoDOT group has significantly more people with at least some years of college education.

**Table 3.1: Comparisons of Missouri Census Data and MoDOT Survey Sample**

	State of Missouri (%)*	MoDOT Survey Sample (%)**
<b>AGE GROUPS</b>		
20-29 years	18.4	11.6
30-39 years	22.7	17.3
40-49 years	20.2	22.5
50-59 years	13.6	18.4
60-69 years	11.1	13.3
70 and more years	13.9	14.0
<b>GENDER</b>		
Male	47.3	54.9
Female	52.7	45.1
<b>EDUCATION</b>		
< High School	26.1	8.2
High School/GED	33.1	30.6
Some College/No Degree	18.4	25.1
College Graduate	16.2	22.4
Post Grad./ Prof. Bus School	6.1	13.8

\* State totals for AGE and GENDER are based on 1996 Census; EDUCATION is based on 1990 Census of adults 25 and older

\*\* Sample total for AGE does not include 45 cases 18-19 years of age and 14 missing/refused; GENDER does not include 1 missing case; EDUCATION does not include 7 refusals

### 3.3 Respondent Transportation Characteristics

#### 3.3.1 Miles Driven

Respondents were asked “Approximately how many miles do you drive per year, including miles driven for both pleasure and business?” The average number of miles driven was 17,139. Six percent (N=88) of the respondents indicated that they did not drive. *Figure 3.1* indicates that the plurality of respondents (38.2 percent, N=561) drive 10,000 – 19,999 miles per year.

**Figure 3.1: Miles Driven per Year by Percentage of Respondents**

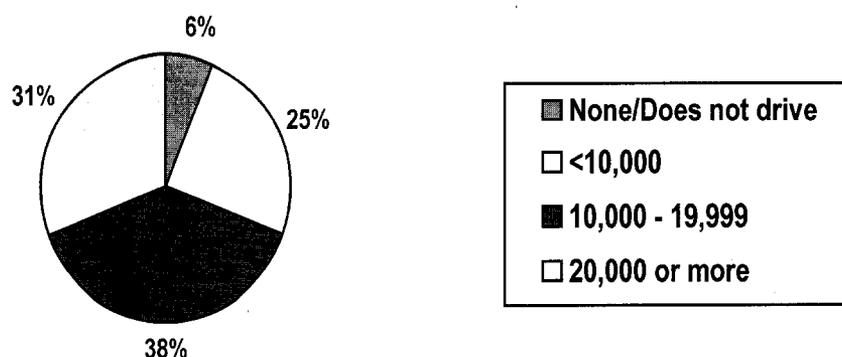


Table 3.3 presents a visual overview of the responses for the three regions of the state. The average number of miles driven per year by respondents in the Remainder of the State is significantly more than the miles driven per year by respondents in both the Kansas City Area and the St. Louis Area. The percentage of respondents who do not drive in the Remainder of the State is significantly lower than the percentages of non-drivers in both the Kansas City Area and the St. Louis Area.

**Table 3.1: Comparison of Miles Driven per Year by Region**

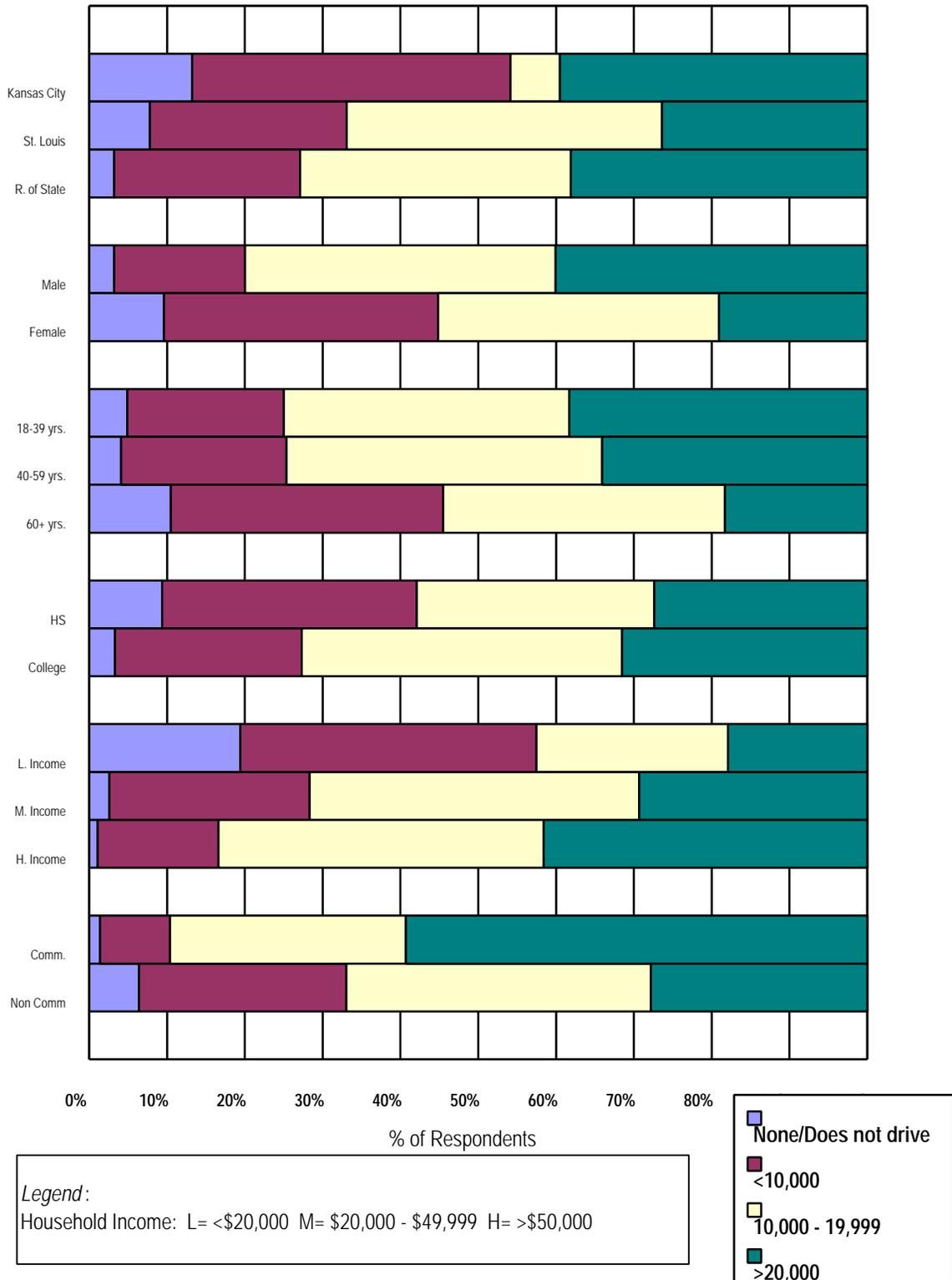
	Kansas City	St. Louis	Remainder of the State	Entire State
Average Miles Driven per Year	14,142	15,286	20,388	17,139
Do Not Drive	8.4%	7.7%	3.2%	6.0%

Figure 3.2 depicts the percentage of miles driven by four categories of mileage by subgroup. For the Kansas City and St. Louis Areas, the largest percentage of respondents drives 10,000 – 19,999 miles per year. In the Remainder of the State, the largest percentage drives 20,000 or more miles per year.

When the number of miles driven per year was analyzed statewide across five demographic variables (age, gender, education, income and commercial driver status), all were statistically significant. Males were more likely to drive 10,000 or more miles per year than females. Females were more likely to drive less than 10,000 miles per year or not to drive.

Those aged 60 and older were more likely not to drive or to drive less than 10,000 miles per year than those under the age of 60. Respondents aged 40-59 were more likely to drive 20,000 or more miles per year than those aged 60 and older. Respondents with a high school education or less were more likely not to drive than individuals with some college or more. Respondents with an annual income less than \$20,000 were more likely not to drive or to drive 10,000 miles or less than those with incomes of \$20,000 or more. Commercial and professional drivers were more likely to drive 20,000 miles or more per year than non-commercial drivers.

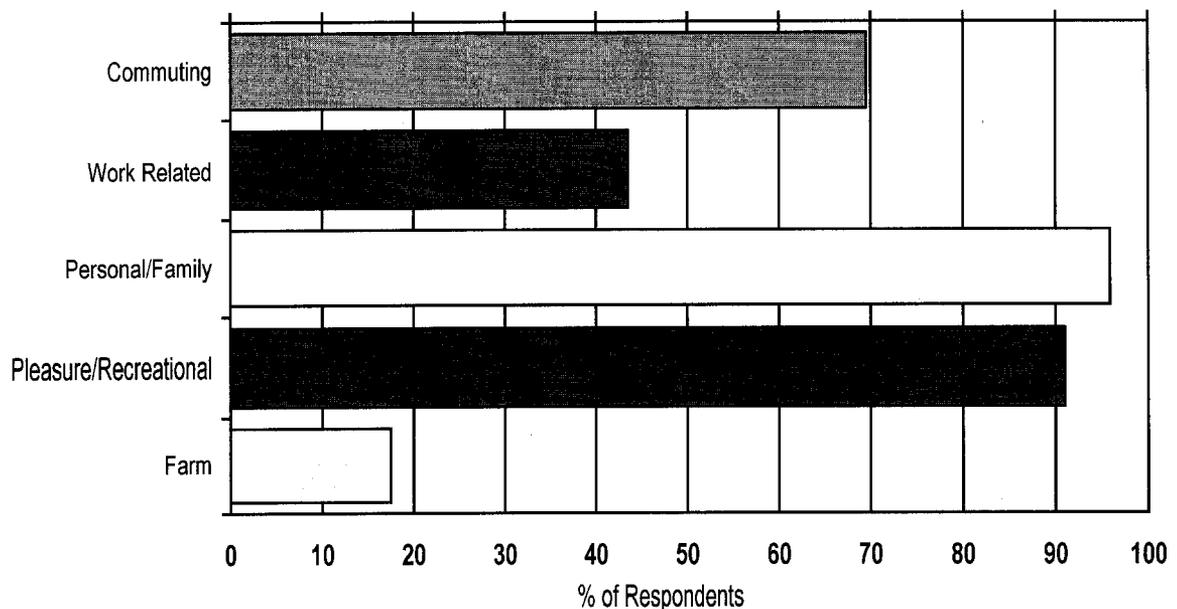
Figure 3.2: Miles Driven by Subgroup



### 3.3.2 Reasons for Travel

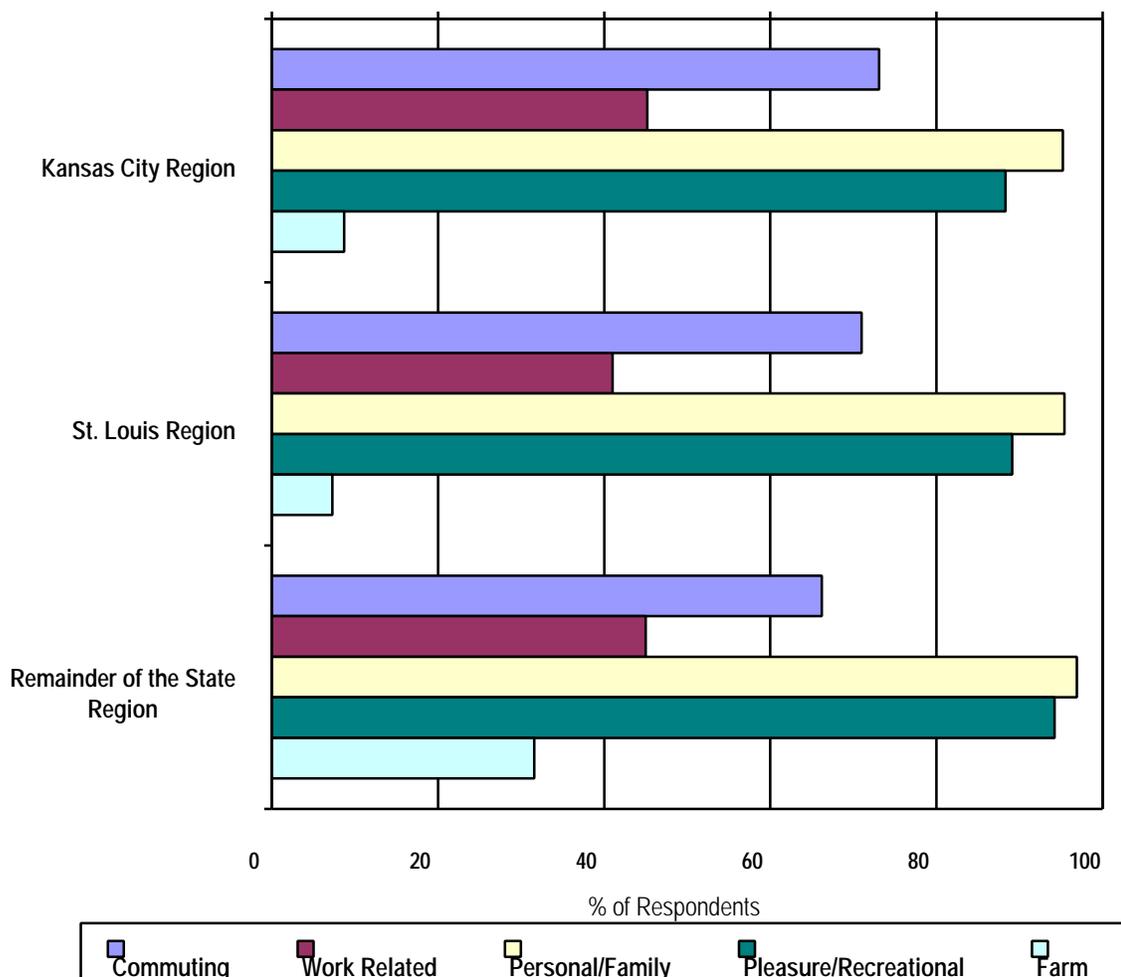
All respondents were read a list of five common reasons people drive or make trips and asked to indicate whether or not they drove or make trips for each reason. The five reasons are commuting to or from work or school, personal or family errands (shopping, doctor's appointments, church, etc.), work related trips (sales calls, business meetings, etc.), pleasure or recreation trips (vacations, visiting friends or relatives, etc.), or farm and agricultural trips. The data in *Figure 3.3* reflect that the most frequent reason for making trips or driving was for personal or family errands (95.9 percent, N=1515) and that the least frequent reason for making trips was for farm or agricultural reasons (17.5 percent, N=276).

**Figure 3.1: Percentage of Respondents by Reason for Driving or Making Trips**



*Figure 3.4* depicts the reasons respondents made trips or drove by region of the state. Of the 1436 respondents who made trips for pleasure or recreation, respondents in the Remainder of the State were significantly more likely (94.2 percent, N=604) to make trips for pleasure or recreation than respondents in the Kansas City Area (88.3 percent, N=295). Of the 276 respondents who drive or make trips for farm/agricultural reasons, those in the Remainder of the State were statistically more likely (31.6 percent, N=203) to make these trips than respondents in either the Kansas City Area (8.7 percent, N=29) or the St. Louis Area (7.3 percent, N=44).

Figure 3.2: Reasons for Making Trips by Region of the State

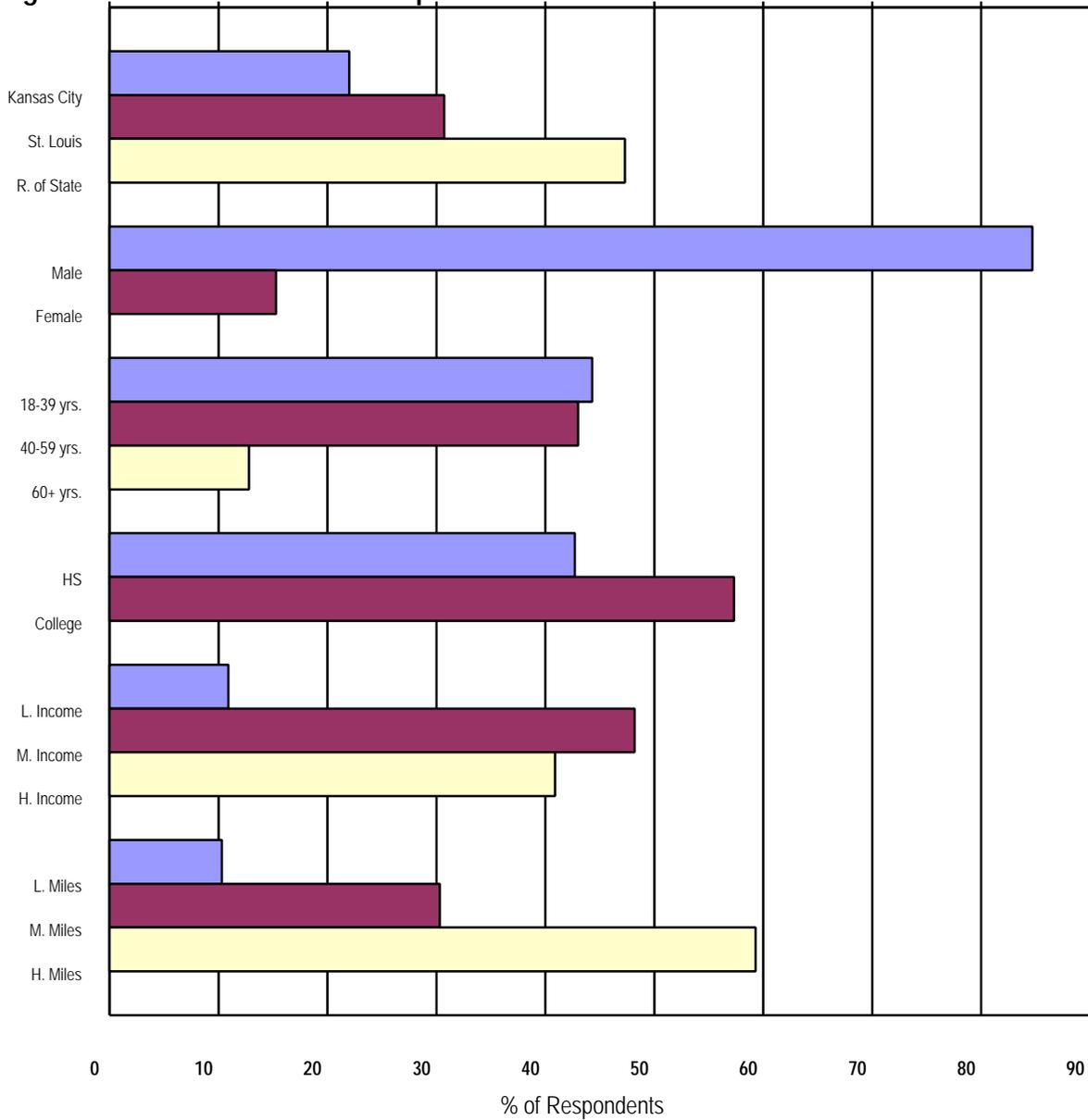


### 3.3.3 Commercial/Professional Driver

Respondents were asked, “Do you do any commercial or professional driving?” Of the 1580 respondents, 9.5 percent (N=150) responded “Yes.” Commercial/professional drivers drive significantly more miles per year than non-commercial drivers; commercial drivers average 35,894 miles and non-commercial drivers average 15,205 miles. *Figure 3.1* depicts the responses of commercial or professional drivers across six variables: region of the state, age, gender, education, income, and miles driven. Commercial drivers were more likely to be male, less than 60 years of age, to have yearly household incomes of \$20,000 or more and to drive 20,000 or more miles per year. There were no statistically significant

differences between commercial and non-commercial drivers when examined by region of the state or education.

**Figure 3.1: Characteristics of Respondents who are Commercial or Professional Drivers**

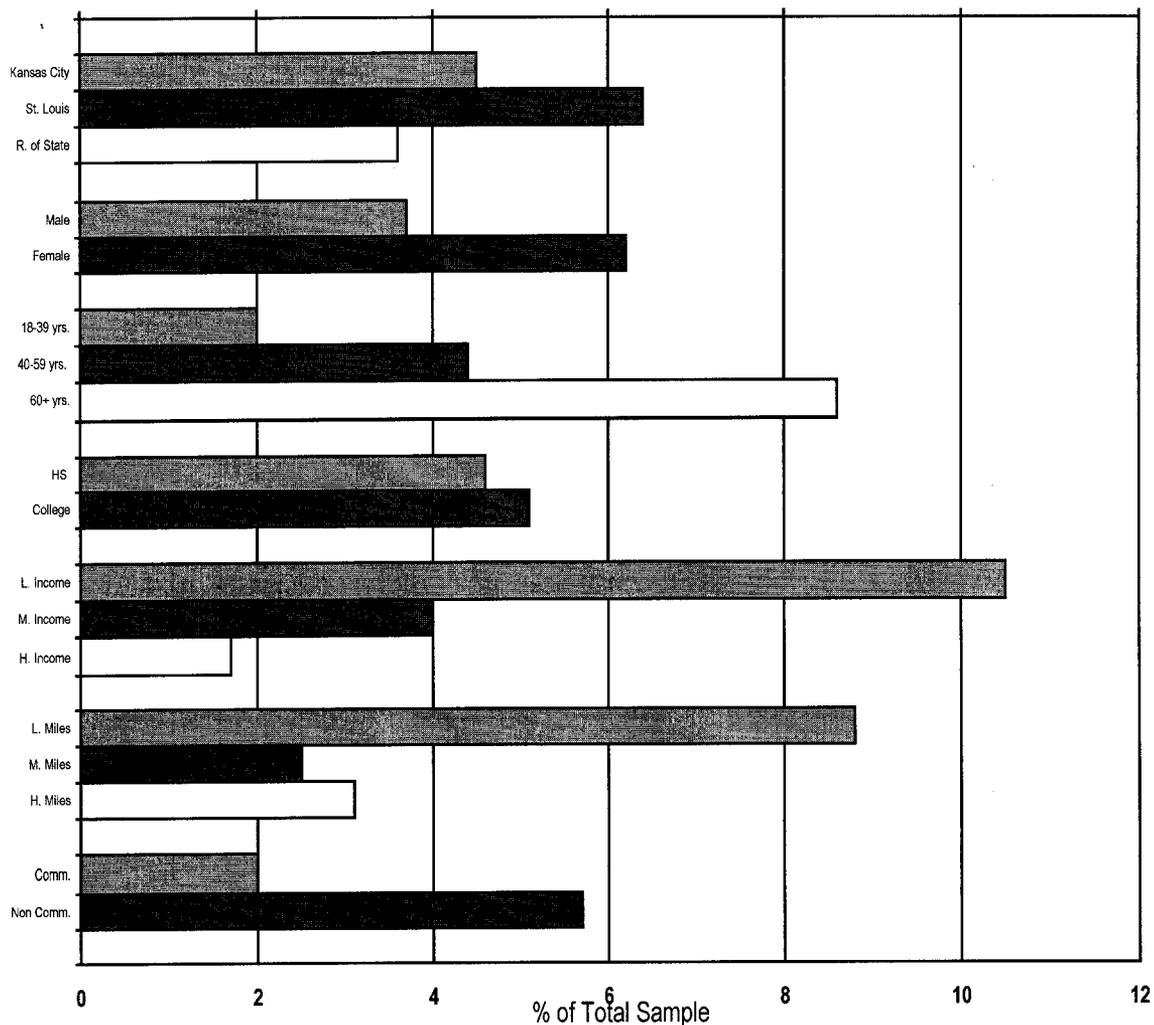


*Legend:*  
 Household Income: L= <\$20,000 M= \$20,000 - \$49,999 H= >\$50,000  
 Annual Miles Driven: L= <10,000 M=10,000 – 19,999 H= >20,000

### 3.3.4 Special Transportation Needs Due to A Disability

Respondents were asked, “Do you have any special transportation needs due to a disability?” Only 4.9 percent (N=77) of the respondents answered “Yes.” Of these 77 respondents, 19.5 percent (N=15) were from the St. Louis Area, 50.6 percent (N=39) were from the Kansas City Area and 29.9 percent (N=23) were from the Remainder of the State. *Figure 3.1* depicts the social and demographic characteristics of those with special transportation needs across region of the state, age, gender, education, income, miles driven and commercial driver status.

**Figure 3.1: Characteristics of Respondents with Special Transportation Needs  
(Percentage of Total Sample)**



**Legend:**

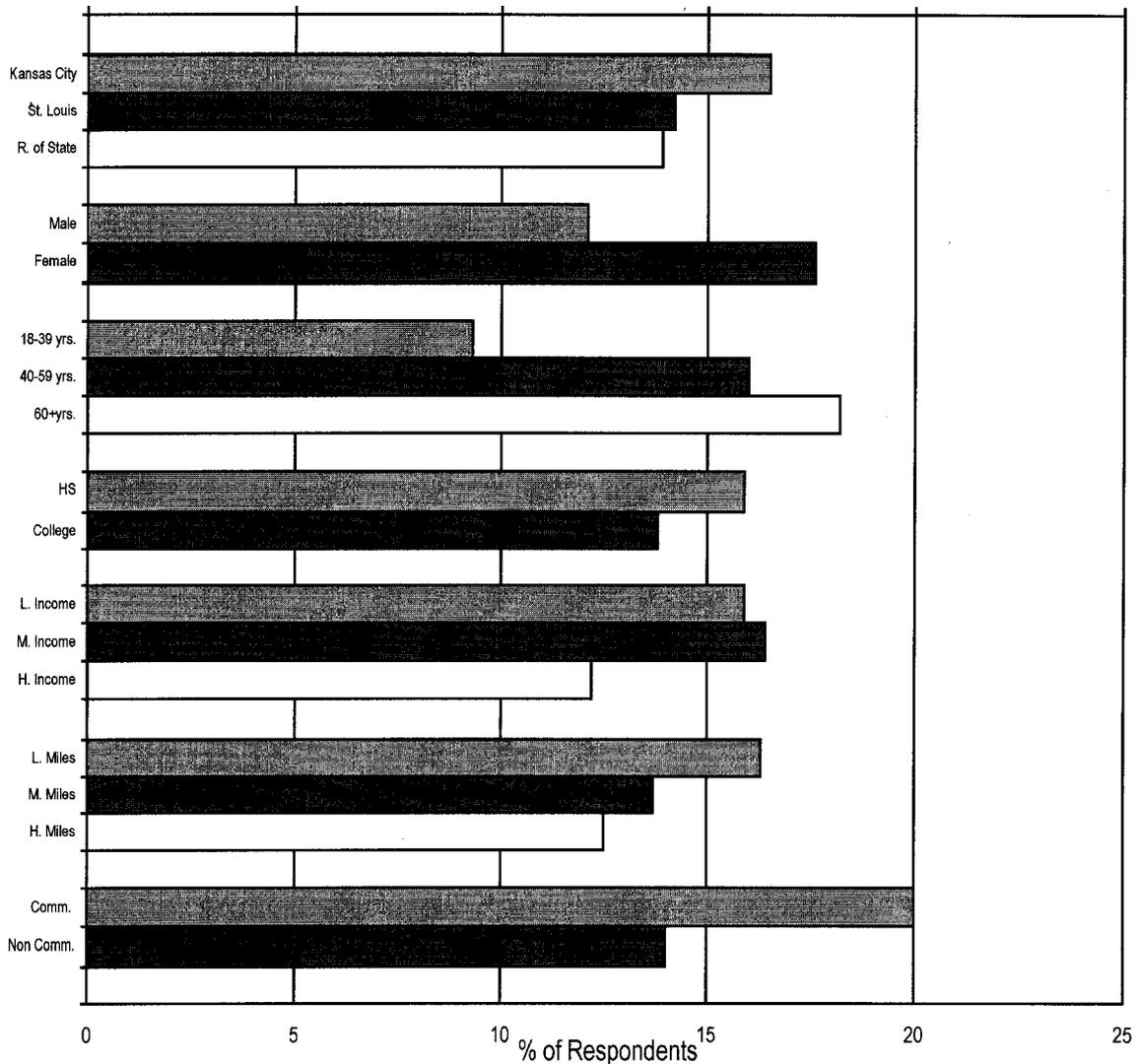
Household Income: L= <\$20,000 M= \$20,000 - \$49,999 H= >\$50,000

Annual Miles Driven: L= <10,000 M=10,000 – 19,999 H= >20,000

### 3.3.5 Responsibility for Transporting Someone with a Disability

Respondents were asked “Are you responsible for providing transportation to someone who has a disability?” Of the 1581 respondents, 14.5 percent (N=230) answered “Yes.” Of these 230 respondents, 23.9 percent (N=55) were from the St. Louis Area, 37.4 percent (N=86) were from the Kansas City Area and 38.7 percent (N=89) were from the Remainder of the State. *Figure 3.1* depicts the characteristics of those providing transportation for someone with a disability.

**Figure 3.1: Characteristics of Respondents Providing Transportation for Someone with Special Transportation Needs (Percentage of Total Sample)**



**Legend:**  
 Household Income: L= <\$20,000 M= \$20,000 - \$49,999 H= >\$50,000  
 Annual Miles Driven: L= <10,000 M=10,000 - 19,999 H= >20,000

Those with special transportation needs due to a disability were statistically more likely to be 60 years of age or older than 18-39 years old. Those respondents with yearly household incomes less than \$20,000 were significantly more likely to have special transportation needs than those making \$20,000 or more per year. Respondents with special transportation needs were statistically more likely to drive less than 10,000 miles per year than respondents who drove 10,000 or more miles per year. There were no statistically significant differences between respondents with special transportation needs and those without special needs when examined by region of the state, gender, education, or commercial driver status.

Those who provided transportation were statistically more likely to be female and 40 years of age or older than 18-39 years old. There were no statistically significant differences between respondents who provided transportation and those who did not when examined by region of the state, education, income, miles driven or commercial driver status.

### 3.3.6 Driver's License

Respondents were asked, "Do you currently hold a valid driver's license?" More than 94 percent (N=1487) responded "Yes." *Figure 3.8* depicts the characteristics of those with a valid driver's license across seven subgroup variables. Respondents in the Remainder of the State were more likely to have a driver's license than either those in the Kansas City Area or those in the St. Louis Area. Respondents with a valid driver's license were more likely to have "some college or more" for education, to have yearly household incomes of \$20,000 or more and to drive 10,000 or more miles per year. Commercial drivers were more likely to have a valid driver's license than non-commercial drivers. There were no statistically significant differences between those with a valid driver's license and those without a license when examined by sex or age.

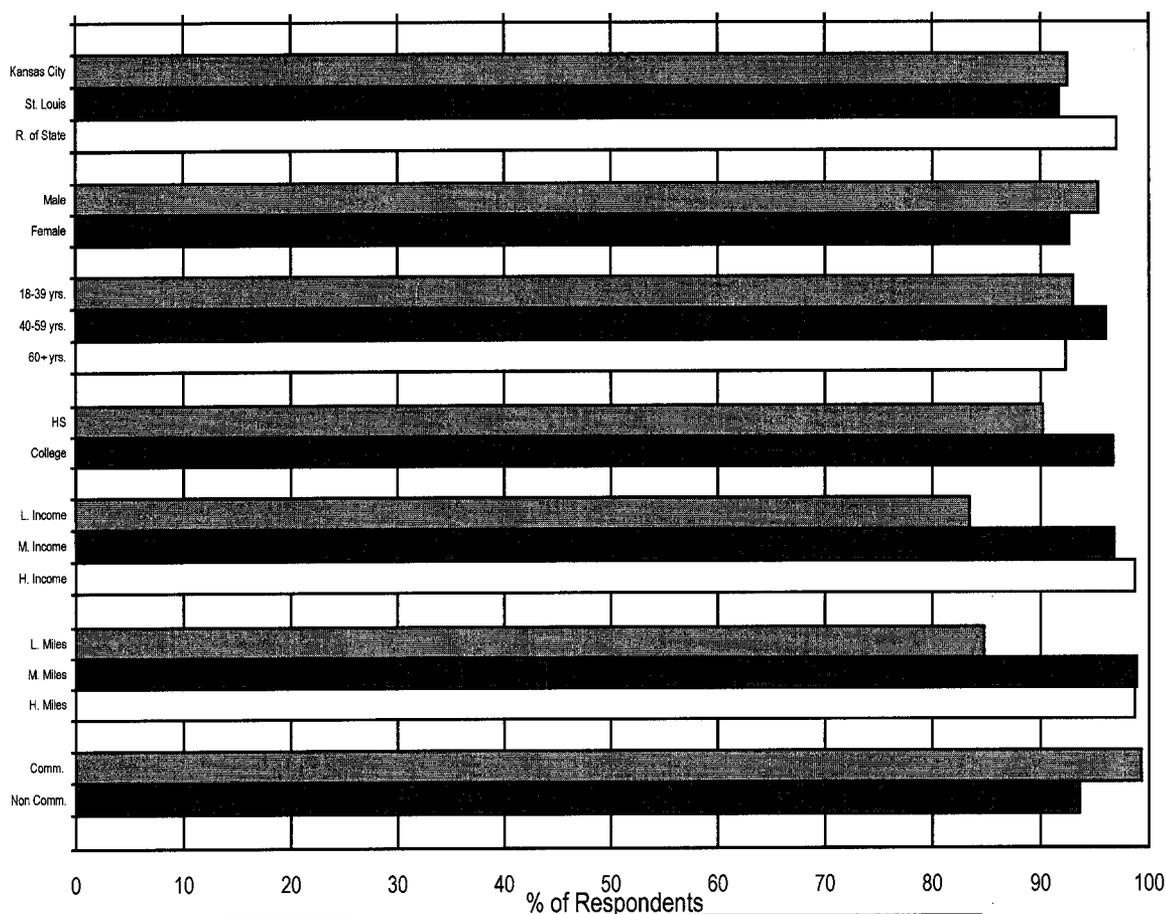
### **3.4 Summary**

In summary, the MoDOT statewide sample is largely representative of the state as a whole and deviates from the overall state population only in minor ways by gender, age, and education. Survey respondents average 48.6 years of age and are about 55 percent male and 45 percent female. A majority has at least some college education, with slightly less than 40 percent ending their formal education with a high school diploma or less. About two-thirds

of respondents are employed and about 22 percent are retired. While a small percentage (7.2 percent) have lived in Missouri less than 6 years, slightly more than 75 percent have been state residents for at least 21 years.

The sample is relatively evenly divided among respondents who annually drive less than 10,000 miles, between 10,000 and 19,999 miles, and more than 20,000 miles. About five percent have no driver’s license, while slightly less than ten percent report commercial or professional driving. Almost all respondents drive for pleasure/recreation and personal/family reasons while nearly 70 percent commute to work. Seventy-seven respondents have special transportation needs due to a disability, and nearly three times that number (N=230) provide transportation to someone who has a disability.

**Figure 3.1: Characteristics of Those with Valid Driver's Licenses (Percentage within Each Subgroup)**



*Legend:*  
 Household Income: L= <\$20,000 M= \$20,000 - \$49,999 H= >\$50,000  
 Annual Miles Driven: L= <10,000 M=10,000 – 19,999 H= >20,000

## Chapter 4: Findings of the Survey: Perceptions of MoDOT Performance

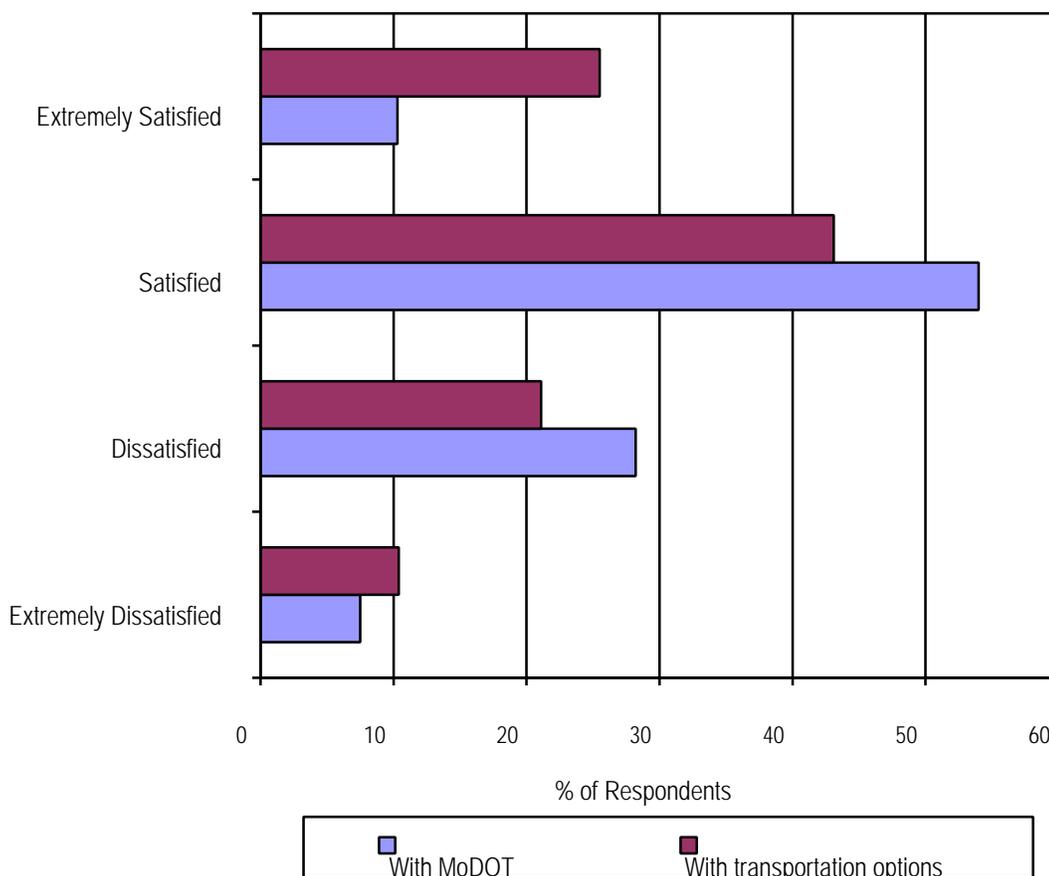
The performance of Missouri's Department of Transportation was measured in several ways. Using multiple approaches provides greater confidence that the evidence gathered is reliable and accurate, especially when using perception data from telephone surveys. Constituents who agreed to be interviewed were asked questions about how they would rate their satisfaction with current department performance in accomplishing a number of aspects of transportation-related work. Constituents were also asked to rate each of these same items regarding their perception about the degree of future attention that the department should give to each aspect. These two dimensions—current satisfaction and future attention—were used to compute discrepancy measures that are discussed in Chapter 5. Constituents were also asked a broad question about their general level of satisfaction with MoDOT performance in providing transportation services. These results are presented and discussed in this chapter.

### *4.1 Overall Satisfaction*

Respondents were asked two general questions concerning their overall satisfaction with transportation in Missouri. One inquiry asked them to give an overall rating of satisfaction with MoDOT as a provider of transportation services and a second solicited respondents' ratings of satisfaction with their transportation options. Statewide, mean levels of satisfaction are higher for transportation options (2.84, on a scale from 1=extremely dissatisfied to 4=extremely satisfied) than for MoDOT (mean of 2.67), although the mean difference between the two issues is not significant. The percentage of respondents selecting each of the satisfaction categories is shown for the total sample in *Figure 4.1*.

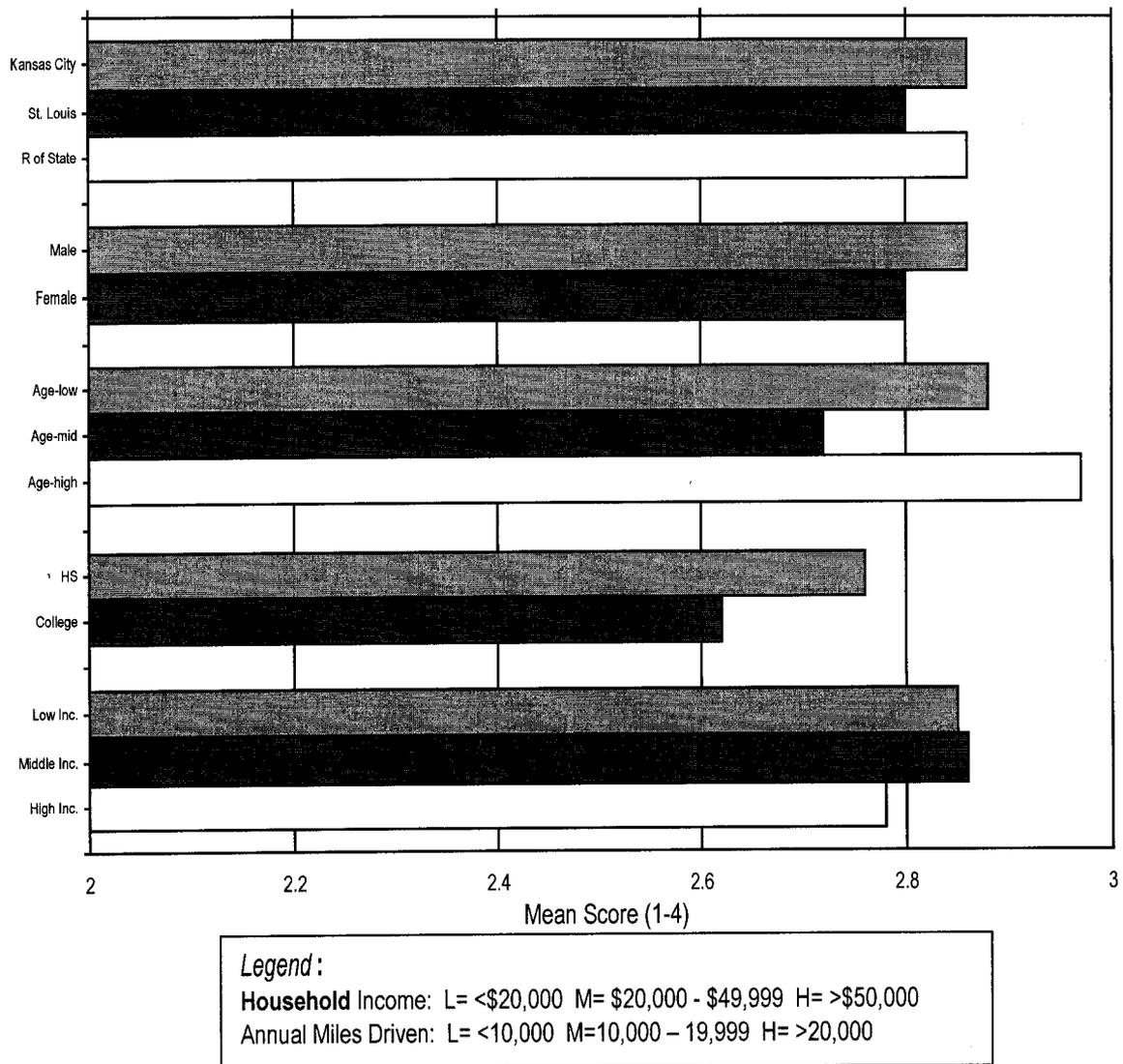
Approximately two-thirds of the statewide sample expressed satisfaction with MoDOT and their transportation options. The most frequent response to each question is "satisfied" (54 percent and 43.1 percent, respectively). A significantly higher percentage of respondents express high levels of satisfaction with their overall transportation options (25.5 percent) versus the number who claimed extreme satisfaction with MoDOT (10.3 percent). Among respondents claiming to be dissatisfied, about 10 percent claimed "extreme" dissatisfaction with their transportation options and roughly eight percent cited serious discontent with MoDOT.

**Figure 4.1: Overall Satisfaction with MoDOT and Transportation Options, by Total Sample**



There are several significant subgroup differences in mean overall satisfaction scores for both questions (*Figure 4.2*). Before discussing these, however, note that region and gender differences are not significant for either variable. Age, education, and income subgroups statewide show important variance in ratings of overall satisfaction for MoDOT. In terms of age differences, those in the middle age category (40-59 years) averaged significantly lower ratings than respondents in either the younger or older groups. There were no significant differences between the latter groups. Within the three regions, the most pronounced differences were found in the Remainder of the State where respondents in the middle age category averaged the lowest mean (2.49) of any age group in any region.

**Figure 4.2: Subgroup Mean Scores of Overall Satisfaction with Transportation Options**



Significance testing of education impacts between groups show that respondents whose education did not go beyond high school are significantly more satisfied with MoDOT than are respondents with any level of post-secondary educational experience. The mean differences between educational groups are more pronounced in the two metropolitan regions than in the Remainder of the State. Similar patterns are revealed in an analysis of income groups. Respondents with lower levels of income express significantly higher ratings of overall satisfaction with MoDOT than do citizens with higher income. For example, 23.9 percent of people with household incomes less than \$10,000 per year are “extremely satisfied” with MoDOT versus only 5.8 percent of respondents in the highest income category. In summary, evaluations of MoDOT are highest among citizen groups with lower

levels of education and income, and within the youngest and oldest age groups. Middle-aged persons with high levels of education and income are the most likely to express dissatisfaction in their overall rating of MoDOT.

In regard to overall satisfaction with transportation options (*Figure 4.2*), age and education again show significant differences, but income does not. The relationships between age and education follow the same patterns in terms of satisfaction with transportation options as they did with satisfaction regarding MoDOT. Middle-aged persons, as well as those with higher educational levels, report overall lower levels of satisfaction. Across the state, those in the oldest age category and with lower amounts of education are most satisfied with their transportation options.

Finally, there are some interesting differences in the relationship between miles driven and responses to these two questions. As shown in *Table 4.1*, nearly twice as many respondents who do not drive express high satisfaction with MoDOT, but a similarly disproportionate share of this group cites extreme dissatisfaction with their transportation options. This pattern suggests that a sizeable minority of respondents feel their transportation needs are unfulfilled, but they do not necessarily hold MoDOT responsible for meeting those needs. The frequency of respondents who do not drive is more than twice as high in the two metro regions, so these results suggest the need for development of alternative urban-related transportation systems. However, the transportation options available to non-drivers, particularly elderly residents, in rural areas, may also be a problem deserving attention.

**Table 4.1: Statewide Frequencies of Overall Satisfaction, by Miles Driven**

	Overall Satisfaction with MoDOT			
Annual Miles Driven	Extremely Dissatisfied (%)	Dissatisfied (%)	Satisfied (%)	Extremely Satisfied (%)
None/Don't Drive	8.0	20.5	51.1	20.5
< 10,000 miles	5.5	28.7	56.2	9.6
10,000-19,999 miles	7.4	29.6	54.2	8.8
> 20,000 miles	8.6	29.2	53.5	8.6
	Overall Satisfaction with transportation options			
None/Don't Drive	18.4	21.8	27.6	32.2
< 10,000 miles	10.9	18.9	43.3	26.9
10,000-19,999 miles	7.8	24.3	42.9	25.0
>20,000 miles	11.7	20.0	46.9	21.5

#### ***4.2 Current Satisfaction with Aspects of MoDOT's Transportation Work***

Survey respondents were asked “How satisfied are you with MoDOT’s current performance in [item]” on 40 items related to aspects of the department’s transportation work on a four-point scale (1= extremely dissatisfied, 2=dissatisfied, 3=satisfied and 4= extremely satisfied). No midpoint rating was provided to encourage respondents to make a rating in one direction or another. The 40 items covered topics on signage and signals, bridges, road maintenance, bicycle and pedestrian issues, railroads, safety and customer service as presented in *Table 4.1*. St. Louis Region respondents were asked to respond to an additional item concerning the MetroLink light rail system. Using these responses, average rating scores were computed as indicators for each of the 41 areas of performance. The same procedure was followed, using the same items, to secure information from respondents regarding their expectations for future priorities placed on these items by MoDOT. Finally, discrepancy scores were computed for each of the 41 items using the formula in *Figure 1.1*. The discrepancy scores are charted in graphic form for better analysis of areas in which MoDOT performance may be managed and also analyzed for patterns correlating with respondent characteristics. The discrepancy scores and analyses are reported in Chapter 5.

MoDOT constituents surveyed in this study were uniformly satisfied in their perceptions of current agency performance. As shown in *Table 4.1*, the mean rating for all 40 items in the survey was above 2.50 meaning that those who rated current performance satisfactory or extremely satisfactory did so more frequently than those who rated current performance as unsatisfactory.<sup>7</sup> Only one exception to this statement exists: one item for the Kansas City Area (involving the provision of safe bicycle or pedestrian pathways along highways) received an average rating of 1.99.

As shown in *Table 4.1*, respondents in the total sample rated “placing construction signs to mark work areas” (Item 1) and “working traffic signals” (Item 2) highest in satisfactory performance. The same items were rated as the two highest in satisfaction for all three regions. In addition to these two items, five other items were ranked in the top five

---

<sup>7</sup> Each item was assigned a number based on its mean score for the entire survey sample. The highest ranked item was assigned number one and the lowest ranked item was assigned number 40. Number 41 was assigned to the MetroLink item because it was only asked in the St. Louis Region. The number assigned to an item is used throughout all the tables in this report. Thus, item number one is always “Placing orange construction signs to mark active work areas” even if its ranking changed from one region to another.

statewide.<sup>8</sup> These five items include “marking railroad crossings” (Item 3), “providing rest areas” (Item 4), “placing yellow warning signs” (Item 5), “providing a sufficient number of airports” (Item 6) and “setting speed limits” (Item 7). The two urban areas included other items in their five highest rated items. The Kansas City Region included “airport access” (Item 6) and “setting of speed limits” (Item 7) and the St. Louis Region included “providing wide enough traffic lanes to insure safety” (Item 9) and “use of electronic message boards to advise drivers of highway conditions” (Item 8) in the top five highest rated items. There is substantial consistency in the distribution of these ratings among the total population and the three regions for those items rated highest in satisfaction as well as in those items rated lowest. This consistency suggests a fairly stable set of results for this distribution and a conclusion that there are few differences in perception among the regions.

Rankings in the Remainder of the State most closely followed the rankings of the entire state for the first five items. As can be seen from *Table 4.1*, items that ranked high in current satisfaction for one region or for the entire state were sometimes ranked lower in another region. For example, Item 6, “providing sufficient number of airports,” was the third highest ranked item for satisfaction in the Kansas City and St. Louis Regions, but was ranked 11<sup>th</sup> for the Remainder of the State. Data Appendix C provides rankings for each separate region of the state.

All regions ranked Item 40, “providing pedestrian/bicycle pathways,” as the one with which they were least satisfied. The three regions were more closely aligned in their rankings of the items with the lowest mean satisfaction scores than those with the highest mean satisfaction scores; i.e., there is less variation among the five lowest ranked items than among the five highest ranked items.

Item number boxes marked with an “\*” indicate that there is a significant difference between mean scores for that item. *Table 7.3* provides additional information on the specific difference(s) for each region compared to other regions and the state as a whole. In general, the mean scores for the Remainder of the State region usually differed statistically from either the St. Louis Region or the Kansas City Region or both.

---

<sup>8</sup> Due to tie mean scores, three issues have the ranking of “5” for the statewide responses.

**Table 4.1: Ranking of Mean Level of Current Satisfaction Statewide and by Region**

(Scale of Extremely Dissatisfied =1 to Extremely Satisfied = 4)

Item #	Item	Entire State	Kansas City Area	St. Louis Area	Remainder of the State
1 *	Placing orange construction signs to mark active work areas	1 (3.27)	1 (3.19)	1 (3.22)	1 (3.36)
2 *	Ensuring that traffic signals and lights are working	2 (3.19)	2 (3.09)	2 (3.09)	2 (3.33)
3 *	Marking railroad crossings	3 (3.03)	6 (2.92)	5 (2.98)	3 (3.12)
4	Providing rest area services and facilities that meet my needs	4 (3.00)	4 (3.04)	9 (2.94)	5 (3.04)
5 *	Placing yellow warning signs to assure sufficient response time	5 (2.99)	6 (2.92)	9 (2.94)	4 (3.08)
6	Providing a sufficient number of local/regional airports	5 (2.99)	3 (3.07)	3 (3.01)	11 (2.91)
7	Setting speed limits	5 (2.99)	5 (2.98)	8 (2.95)	7 (3.03)
8 *	Using electronic message boards to advise drivers of delays or construction areas	8 (2.93)	11 (2.79)	5 (2.98)	9 (2.96)
9 *	Providing lanes that are wide enough for safe driving	8 (2.93)	6 (2.92)	3 (3.01)	14 (2.85)
10 *	Having signs that can be easily seen at night or in bad weather	10 (2.91)	9 (2.85)	14 (2.82)	6 (3.03)
11 *	Building bridges that are wide enough to feel safe	11 (2.87)	14 (2.73)	7 (2.97)	14 (2.85)
12 *	Building bridges that last long enough	12 (2.85)	20 (2.64)	13 (2.83)	8 (2.97)
13	Mowing along roadways to improve the appearance of the roadway	13 (2.82)	10 (2.81)	12 (2.84)	16 (2.81)
14 *	Removing snow / ice efficiently	14 (2.81)	12 (2.75)	19 (2.69)	9 (2.96)
15	Communicating with the public in easy to understand language	15 (2.80)	12 (2.75)	11 (2.85)	18 (2.79)
16 *	Keeping roadsides free of litter and debris	16 (2.78)	18 (2.65)	17 (2.77)	13 (2.86)
17	Providing useful information about construction, repairs or road conditions	16 (2.78)	16 (2.70)	16 (2.79)	16 (2.81)
18	Striping center lines and road edges to ensure safety	18 (2.77)	16 (2.70)	15 (2.80)	19 (2.78)
19	Lighting interchanges and bridges	19 (2.74)	15 (2.71)	18 (2.76)	20 (2.72)
20 *	Providing a sufficient number of commuter parking spaces	20 (2.73)	22 (2.61)	21 (2.62)	12 (2.89)
21	Offering a toll free phone line that is useful	21 (2.64)	18 (2.65)	23 (2.57)	21 (2.71)

Note: \* Statistically significant ( $p \leq 0.01$ ) difference. For direction of significance, see Table 7.3.

**Table 4.2: Ranking of Mean Level of Current Satisfaction Statewide and by Region  
(cont.)**

Item #	Item	Entire State	Kansas City Area	St. Louis Area	Remainder of the State
22	Providing sufficient passing opportunities on two-lane highways	22 (2.60)	24 (2.55)	22 (2.61)	23 (2.62)
23 *	Providing crosswalks and signals that allow you to cross the highway safely	23 (2.55)	27 (2.45)	32 (2.45)	22 (2.69)
24	Providing pavement markings that can be easily seen in wet weather	24 (2.53)	26 (2.46)	29 (2.48)	24 (2.60)
25	Building new highways to meet future demand	24 (2.53)	23 (2.57)	26 (2.55)	27 (2.49)
26	Treating highway surfaces to resist skidding in wet weather	26 (2.52)	25 (2.48)	30 (2.47)	25 (2.58)
27 *	Honoring commitments to provide and maintain Missouri's transportation system	27 (2.51)	29 (2.44)	20 (2.63)	29 (2.43)
28 *	Providing shoulders that are adequate to pull off the road safely	27 (2.51)	21 (2.62)	23 (2.57)	32 (2.39)
29	Providing sufficient transportation for those who don't or can't drive	28 (2.50)	30 (2.39)	25 (2.56)	26 (2.50)
30	Improving existing highways to meet increasing traffic demands	30 (2.46)	27 (2.45)	27 (2.50)	30 (2.42)
31	Providing Amtrak passenger rail service to meet your needs	31 (2.38)	31 (2.36)	30 (2.47)	35 (2.29)
32	Planning a project in a reasonable amount of time	32 (2.34)	33 (2.27)	34 (2.32)	33 (2.38)
33 *	Completing road and bridge construction and repairs in a timely manner	33 (2.33)	37 (2.13)	35 (2.30)	28 (2.45)
34 *	Providing the public with adequate opportunities for input in project planning	34 (2.31)	35 (2.18)	38 (2.26)	31 (2.41)
35 *	Distributing transportation funds fairly to all areas of the state	35 (2.30)	32 (2.33)	33 (2.41)	39 (2.20)
36	Using public funds in a cost effective manner	36 (2.29)	34 (2.26)	35 (2.30)	35 (2.29)
37 *	Providing pavement that lasts a long time	36 (2.29)	36 (2.17)	39 (2.26)	33 (2.38)
38	Maintaining the pavement so it provides a smooth ride	38 (2.22)	38 (2.12)	37 (2.27)	37 (2.22)
39 *	Repairing pavement surface promptly	39 (2.15)	39 (2.03)	40 (2.13)	37 (2.22)
40	Providing pedestrian / bicycle pathways on or adjacent to highways that are safe	40 (2.08)	40 (1.99)	41 (2.10)	40 (2.12)
41	Providing passenger light rail routes, such as Metro link (St. Louis)	-	-	28 (2.49)	-

Note: \* Statistically significant ( $p \leq 0.01$ ) difference. For direction of significance, see Table 7.3.

In addition, the 41 items were ranked according to the percentage of respondents responding as either satisfied with current performance or extremely satisfied. These results are shown in *Table 4.2*. These results indicate that, for three-fourths of the items in the survey, more than half the respondents surveyed rated the items regarding MoDOT's current performance "satisfied" or "very satisfied."

There are a number of significant subgroup differences in the mean current satisfaction scores for 29 of the 41 items. A summary table of these items with significant subgroup differences can be found in *Table 7.4*. The age, education, income and miles driven subgroups showed more differences than either region or commercial driver status. In general, middle aged (39 – 59 years old) respondents with more than a high school education who drive 20,000 or more miles per year and make \$50,000 or more per year, were less satisfied with MoDOT's performance on the 41 items than other respondents. Section C in the Data Appendix contains detailed figures and tables with additional data on the differences between subgroups.

**Table 4.2: Percentage of Respondents Indicating “Satisfied” or “Extremely Satisfied” with Current MoDOT Performance Statewide and by Region**

Item #	Item	Entire State	Kansas City Area	St. Louis Area	Remainder of the State
1	Placing orange construction signs to mark active work areas	86.5	83.5	83.1	91.1
2	Ensuring that traffic signals and lights are working	84.0	81.1	81.4	89.4
5	Placing yellow warning signs to assure sufficient response time	77.1	75.7	73.7	81.1
7	Setting speed limits	76.3	76.8	74.9	77.4
3	Marking railroad crossings	75.8	70.3	74.9	79.4
4	Providing rest area services and facilities that meet my needs	75.4	78.3	71.6	77.5
6	Providing a sufficient number of local/regional airports	74.7	79.2	75.2	71.7
9	Providing lanes that are wide enough for safe driving	73.9	75.6	77.3	69.8
8	Using electronic message boards to advise drivers of delays or construction areas	72.2	65.5	74.7	73.2
10	Having signs that can be easily seen at night or in bad weather	71.7	71.2	66.9	76.5
11	Building bridges that are wide enough to feel safe	71.1	58.3	69.4	75.7
12	Building bridges that last long enough	69.8	66.8	75.8	69.0
13	Mowing along roadways to improve the appearance of the roadway	68.3	68.2	70.3	66.5
14	Removing snow/ice efficiently	68.7	67.3	62.8	75.2
15	Communicating with the public in easy to understand language	67.5	67.0	68.6	66.8
18	Striping center lines and road edges to ensure safety	67.2	63.1	67.6	66.5
16	Keeping roadsides free of litter and debris	66.9	61.9	66.0	70.4
17	Providing useful information about construction, repairs or road conditions	66.2	62.5	65.5	66.3
19	Lighting interchanges and bridges	64.8	64.5	66.0	63.8
20	Providing a sufficient number of commuter parking spaces	63.7	57.1	59.9	70.9

**Table 4.3: Percentage of Respondents Indicating “Satisfied” or “Extremely Satisfied” with Current MoDOT Performance Statewide and by Region (cont.)**

Item #	Item	Entire State	Kansas City Area	St. Louis Area	Remainder of the State
21	Offering a toll free phone line that is useful	58.0	57.3	55.2	61.0
22	Providing sufficient passing opportunities on two-lane highways	56.6	54.1	58.3	56.5
23	Providing crosswalks and signals that allow you to cross the highway safely	54.9	48.2	51.2	62.0
27	Honoring commitments to provide and maintain Missouri's transportation system	54.3	50.2	60.9	50.1
26	Treating highway surfaces to resist skidding in wet weather	53.1	51.4	50.7	56.2
24	Providing pavement markings that can be easily seen in wet weather	52.6	50.6	50.2	54.8
25	Building new highways to meet future demand	52.6	53.9	54.8	49.9
28	Providing shoulders that are adequate to pull off the road safely	52.5	57.6	55.1	47.3
29	Providing sufficient transportation for those who don't or can't drive	52.3	45.2	53.8	54.5
30	Improving existing highways to meet increasing traffic demands	49.5	48.8	52.1	47.5
31	Providing Amtrak passenger rail service to meet your needs	47.1	46.5	50.9	42.9
33	Completing road and bridge construction and repairs in a timely manner	43.3	31.6	43.3	49.4
32	Planning a project in a reasonable amount of time	43.1	38.8	43.7	44.8
35	Distributing transportation funds fairly to all areas of the state	43.0	43.9	46.4	39.6
34	Providing the public with adequate opportunities for input in project planning	41.9	36.5	38.9	47.3
36	Using public funds in a cost effective manner	41.7	41.6	42.0	41.4
37	Providing pavement that lasts a long time	40.4	34.2	40.0	43.9
38	Maintaining the pavement so it provides a smooth ride	35.3	31.4	38.0	35.9
39	Repairing pavement surface promptly	32.5	27.1	32.7	35.2
40	Providing pedestrian/bicycle pathways on or adjacent to highways that are safe	31.0	25.4	32.7	32.4
41	Providing passenger light rail routes, such as Metro link (St. Louis)	-	-	49.7	-

### ***4.3 Future Attention***

Survey respondents were next asked to respond to the question “How much attention should MoDOT place on [item] in the future?” for the same 40 (or 41) Items on a four-point scale (1= a lot less attention, 2= some attention, 3= more attention, and 4= a lot more attention). In general, those aspects of transportation work that MoDOT constituents felt the agency should give more attention in the future addressed maintenance of transportation infrastructure (e.g., roads and bridges) and public management and distribution of resources.

*Table 4.1* presents a ranking by overall mean score (highest to lowest) for each of these 41 variables by the entire state and for each of the three separate regions. Section C in the Data Appendix provides rankings for each separate region of the state. The top five items for the entire state and for each region are highlighted on the table. Items with identical or “tie” mean scores were all assigned the next number in sequence. For example, as seen in *Table 4.1*, “honoring commitments” (Item 27), “maintaining pavement for smooth rides” (Item 38) and “building bridges that last” (Item 12) all have a ranking of “6” for the entire state.

All three regions ranked “using public funds cost-effectively” (Item 36) as the aspect of work that needed the most attention in the future. As with the rankings of current satisfaction, the rankings of future attention also varied from region to region. However, rankings of respondents in the Remainder of the State most closely matched the entire state rankings. A notable exception to this is that the Remainder of the State ranked item 39, “repairing pavement surface promptly,” as seventh whereas the Kansas City and St. Louis Areas ranked it as first and second respectively.

All regions ranked “setting speed limits” (Item 7) as the one they believed needed the least amount of attention in the future. The three regions were more closely aligned in their rankings of the areas with the lowest mean future attention scores than those with the highest mean future attention scores; i.e., there is less variation among the five lowest ranked Items than among the five highest ranked Items.

Boxes marked with an “\*” next to the ranking indicate that there is a significant difference ( $p < .01$ ) between that mean score and at least one other mean score for that area. *Table 7.3* provides additional information on the specific difference(s). In general, mean

scores for the Remainder of the State usually differed from either the St. Louis Region or the Kansas City Region or both.

In addition, these 41 items were ranked according to the percentage of respondents responding as desiring “more attention” placed on an area by MoDOT or a “lot more attention.” These results are shown in *Table 4.5*. These results are very interesting and may be difficult to interpret at first consideration. The results indicate that nearly all forty items regarding the transportation work of MoDOT deserve more attention in the future. Clearly, respondents believe that even better performance is possible than at present because the data in *Table 4.2* indicate high levels of satisfaction with current performance. Respondents believe or perceive that the department can do a better job.

There are a number of significant subgroup differences in overall mean future attention scores for 37 of the 41 items. A summary table of these items with significant subgroups differences can be found in *Table 7.1*. The region, age, education and income subgroups showed more differences than gender, miles driven or commercial driver status. In general, middle aged (39 – 59 years old) respondents with more than a high school education who drive 20,000 or more miles per year and make \$50,000 or more per year, perceived that more future attention was needed on these 41 items than other respondents. Data Appendix C contains detailed figures and tables with additional data on the differences between subgroups.

**Table 4.1 Ranking of Mean Level of Future Attention Statewide and by Region**

(Scale of Extremely Dissatisfied =1 to Extremely Satisfied = 4)

Item #	Item	Entire State	Kansas City Area	St. Louis Area	Remainder of the State
36	Using public funds in a cost effective manner	1 (3.37)	1 (3.33)	1 (3.39)	1 (3.38)
37	Providing pavement that lasts a long time	2 (3.34)	4 (3.32)	3 (3.37)	3 (3.32)
39	Repairing pavement surface promptly	3 (3.31)	1 (3.33)	2 (3.38)	7 (3.24)
30	Improving existing highways to meet increasing traffic demands	4 (3.28)	10 (3.23)	5 (3.30)	4 (3.28)
35	Distributing transportation funds fairly to all areas of the state	4 (3.28)	13 (3.19)	8 (3.28)	2 (3.33)
27	Honoring commitments to provide and maintain Missouri's transportation system	6 (3.27)	6 (3.29)	10 (3.27)	5 (3.26)
38	Maintaining the pavement so it provides a smooth ride	6 (3.27)	6 (3.29)	8 (3.28)	6 (3.25)
12	Building bridges that last long enough	6 (3.27)	4 (3.32)	4 (3.31)	8 (3.20)
33	Completing road and bridge construction and repairs in a timely manner	9 (3.26)	1 (3.33)	5 (3.30)	9 (3.19)
24	Providing pavement markings that can be easily seen in wet weather	10 (3.25)	6 (3.29)	5 (3.30)	9 (3.19)
26	Treating highway surfaces to resist skidding in wet weather	11 (3.20)	9 (3.24)	12 (3.24)	13 (3.14)
10*	Having signs that can be easily seen at night or in bad weather	12 (3.18)	10 (3.23)	11 (3.25)	18 (3.09)
14	Removing snow / ice efficiently	12 (3.18)	13 (3.19)	12 (3.24)	16 (3.11)
25	Building new highways to meet future demand	14 (3.15)	20 (3.11)	17 (3.16)	11 (3.15)
32	Planning a project in a reasonable amount of time	14 (3.15)	17 (3.17)	15 (3.18)	15 (3.12)
18	Striping center lines and road edges to ensure safety	16 (3.14)	12 (3.21)	21 (3.11)	14 (3.13)
2	Ensuring that traffic signals and lights are working	16 (3.14)	13 (3.19)	14 (3.20)	20 (3.05)
28	Providing shoulders that are adequate to pull off the road safely	18 (3.13)	18 (3.12)	19 (3.12)	11 (3.15)
11	Building bridges that are wide enough to feel safe	19 (3.11)	20 (3.11)	18 (3.13)	17 (3.10)
29*	Providing sufficient transportation for those who don't or can't drive	20 (3.09)	16 (3.18)	16 (3.17)	24 (2.97)
9	Providing lanes that are wide enough for safe driving	21 (3.08)	20 (3.11)	23 (3.07)	19 (3.07)

Note: \* Statistically significant ( $p \leq .01$ ) difference. For direction of significance, see *Table 7.3*.

**Table 4.4 Ranking of Mean Level of Future Attention Statewide and by Region (cont.)**

(Scale of Extremely Dissatisfied =1 to Extremely Satisfied = 4)

Item #	Item	Entire State	Kansas City Area	St. Louis Area	Remainder of the State
19	Lighting interchanges and bridges	22 (3.05)	20 (3.11)	22 (3.10)	25 (2.96)
34	Providing the public with adequate opportunities for input in project planning	23 (3.04)	25 (3.04)	23 (3.07)	21 (3.00)
3	Marking railroad crossings	24 (3.03)	18 (3.12)	26 (3.06)	26 (2.94)
5	Placing yellow warning signs to assure sufficient response time	25 (3.01)	24 (3.08)	23 (3.07)	29 (2.92)
23	Providing crosswalks and signals that allow you to cross the highway safely	26 (2.99)	27 (3.01)	27 (3.04)	28 (2.93)
17	Providing useful information about construction, repairs or road conditions	26 (2.99)	28 (3.00)	29 (3.02)	26 (2.94)
22	Providing sufficient passing opportunities on two-lane highways	28 (2.98)	26 (3.03)	32 (2.94)	21 (3.00)
15	Communicating with the public in easy to understand language	28 (2.98)	29 (2.99)	31 (2.97)	23 (2.98)
1	Placing orange construction signs to mark active work areas	30 (2.97)	30 (2.98)	27 (3.04)	30 (2.90)
8	Using electronic message boards to advise drivers of delays or construction areas	31 (2.94)	31 (2.93)	30 (3.00)	31 (2.89)
7	Setting speed limits	32 (2.83)	33 (2.88)	33 (2.88)	33 (2.77)
16	Keeping roadsides free of litter and debris	33 (2.82)	32 (2.92)	35 (2.86)	34 (2.74)
21	Offering a toll free phone line that is useful	34 (2.80)	34 (2.86)	36 (2.85)	34 (2.74)
31*	Providing Amtrak passenger rail service to meet your needs	35 (2.73)	36 (2.77)	33 (2.88)	38 (2.55)
13	Mowing along roadways to improve the appearance of the roadway	36 (2.72)	39 (2.65)	40 (2.70)	32 (2.78)
40	Providing pedestrian / bicycle pathways on or adjacent to highways that are safe	37 (2.71)	35 (2.81)	31 (2.72)	37 (2.65)
4	Providing rest area services and facilities that meet my needs	38 (2.70)	37 (2.71)	38 (2.74)	36 (2.66)
20*	Providing a sufficient number of commuter parking spaces	39 (2.66)	38 (2.67)	37 (2.77)	39 (2.54)
6	Providing a sufficient number of local/regional airports	40 (2.49)	40 (2.55)	41 (2.49)	40 (2.46)
41	Providing passenger light rail routes, such as Metro link (St. Louis only)	N/A	N/A	19 (3.12)	N/A

Note: \* Statistically significant ( $p \leq .01$ ) difference. For direction of significance, see *Table 7.3*.

#### ***4.4 Summary***

Respondents to the CSQS survey were asked for their perceptions regarding an overall rating of MoDOT performance and with their overall transportation options. Respondents were also asked to rate their perceived satisfaction with 40 different aspects of MoDOT's work and the amount of future attention they believe MoDOT should give to these same 40 items (41 in the St. Louis region where the light rail transportation option exists). Taken together, these different views of performance provide a reliable assessment of the way citizens view the Department and its priorities for the future.

First, both overall satisfaction with the Department and the ratings respondents provided regarding their assessment of current performance indicates a fairly high level of satisfaction. The majority of respondents rated MoDOT's overall performance satisfactory and their available transportation options as satisfactory. Additionally, the majority of the 40 items related to specific aspects of the Department's work were rated as satisfactory. There were few significant differences in these results regionally or among the various demographic categories used to analyze the data. Those differences that are significant indicate that respondents who are middle-aged, more highly educated, and of higher income groups are more likely to be dissatisfied with current performance than other groups of respondents. One of the most interesting findings relates to the views of those respondents who do not drive or who provide transportation for others and their ratings of their transportation options, where the data suggest significant dissatisfaction with the options available.

Second, even though current ratings of satisfaction were relatively high, citizens appear to be discontent with this status. Nearly all the 40 items related to MoDOT's specific work aspects were rated as needing more (or much more) attention in the future. While there were some significant differences in these findings among the regions or the demographic categories used for data analysis, for the most part, these were few in number. Those demographic categories where there were significant differences included region, age, education and income categories more frequently than for other categories. In general, those aspects of work that respondents felt MoDOT should give more attention to in the future related to maintenance of transportation infrastructure (e.g., roads and bridges) an public management and distribution of resources.

**Table 4.2: Percentage of Survey Respondents Indicating a Desire for “More” or “A lot More” Future Attention on Performance Items**

Item #	Item	Entire State	Kansas City Area	St. Louis Area	Remainder of the State
36	Using public funds in a cost effective manner	83.2	82.1	83.4	83.7
37	Providing pavement that lasts a long time	83.0	82.4	83.6	82.8
30	Improving existing highways to meet increasing traffic demands	82.9	81.8	84.0	82.4
39	Repairing pavement surface promptly	82.7	83.1	85.0	80.4
33	Completing road and bridge construction and repairs in a timely manner	81.7	83.4	83.2	79.2
38	Maintaining the pavement so it provides a smooth ride	81.2	80.5	81.6	81.3
12	Building bridges that last long enough	81.0	83.0	82.9	78.3
27	Honoring commitments to provide and maintain Missouri's transportation system	80.9	82.3	81.2	79.8
35	Distributing transportation funds fairly to all areas of the state	80.1	77.6	80.0	81.4
24	Providing pavement markings that can be easily seen in wet weather	79.9	82.9	81.0	77.4
26	Treating highway surfaces to resist skidding in wet weather	78.3	80.6	79.8	75.6
32	Planning a project in a reasonable amount of time	78.3	79.6	80.5	75.6
14	Removing snow/ice efficiently	76.9	77.3	79.1	74.7
25	Building new highways to meet future demand	76.9	75.8	76.7	77.7
18	Striping center lines and road edges to ensure safety	76.7	80.4	75.2	76.2
10	Having signs that can be easily seen at night or in bad weather	76.4	78.3	78.7	73.2
11	Building bridges that are wide enough to feel safe	75.5	76.2	77.1	73.7
28	Providing shoulders that are adequate to pull off the road safely	75.2	75.4	76.0	74.4
29	Providing sufficient transportation for those who don't or can't drive	75.0	78.6	69.2	70.0
2	Ensuring that traffic signals and lights are working	74.7	76.6	77.1	71.5
9	Providing lanes that are wide enough for safe driving	73.7	74.3	73.7	73.3

**Table 4.5: Percentage of Survey Respondents Indicating a Desire for "More" or "A Lot More" Future Attention on Performance Items (cont.)**

Item #	Item	Entire State	Kansas City Area	St. Louis Area	Remainder of the State
34	Providing the public with adequate opportunities for input in project planning	73.7	73.0	75.3	72.4
19	Lighting interchanges and bridges	73.5	76.6	75.1	70.3
17	Providing useful information about construction, repairs or road conditions	72.4	73.6	74.7	69.6
5	Placing yellow warning signs to assure sufficient response time	71.5	74.9	74.6	67.7
3	Marking railroad crossings	70.9	74.4	73.5	66.6
23	Providing crosswalks and signals that allow you to cross the highway safely	70.6	71.5	71.9	68.9
15	Communicating with the public in easy to understand language	70.4	69.3	60.2	71.0
22	Providing sufficient passing opportunities on two-lane highways	70.2	73.1	67.1	71.7
8	Using electronic message boards to advise drivers of delays or construction areas	69.5	69.6	72.0	67.5
1	Placing orange construction signs to mark active work areas	68.8	69.6	71.9	65.6
7	Setting speed limits	63.2	62.5	65.4	61.4
16	Keeping roadsides free of litter and debris	62.5	67.1	64.3	58.5
21	Offering a toll free phone line that is useful	61.2	63.7	63.2	58.0
4	Providing rest area services and facilities that meet my needs	59.3	58.8	60.0	58.9
13	Mowing along roadways to improve the appearance of the roadway	57.8	54.2	56.6	60.9
40	Providing pedestrian/bicycle pathways on or adjacent to highways that are safe	57.8	62.6	59.2	54.0
31	Providing Amtrak passenger rail service to meet your needs	57.3	60.8	62.9	49.4
20	Providing a sufficient number of commuter parking spaces	56.1	54.2	61.0	52.3
6	Providing a sufficient number of local/regional airports	47.4	49.7	47.5	45.9
41	Providing passenger light rail routes, such as Metro link (St. Louis)	N/A	N/A	72.7	N/A

## Chapter 5: Analyzing Discrepancies to Guide Performance Management

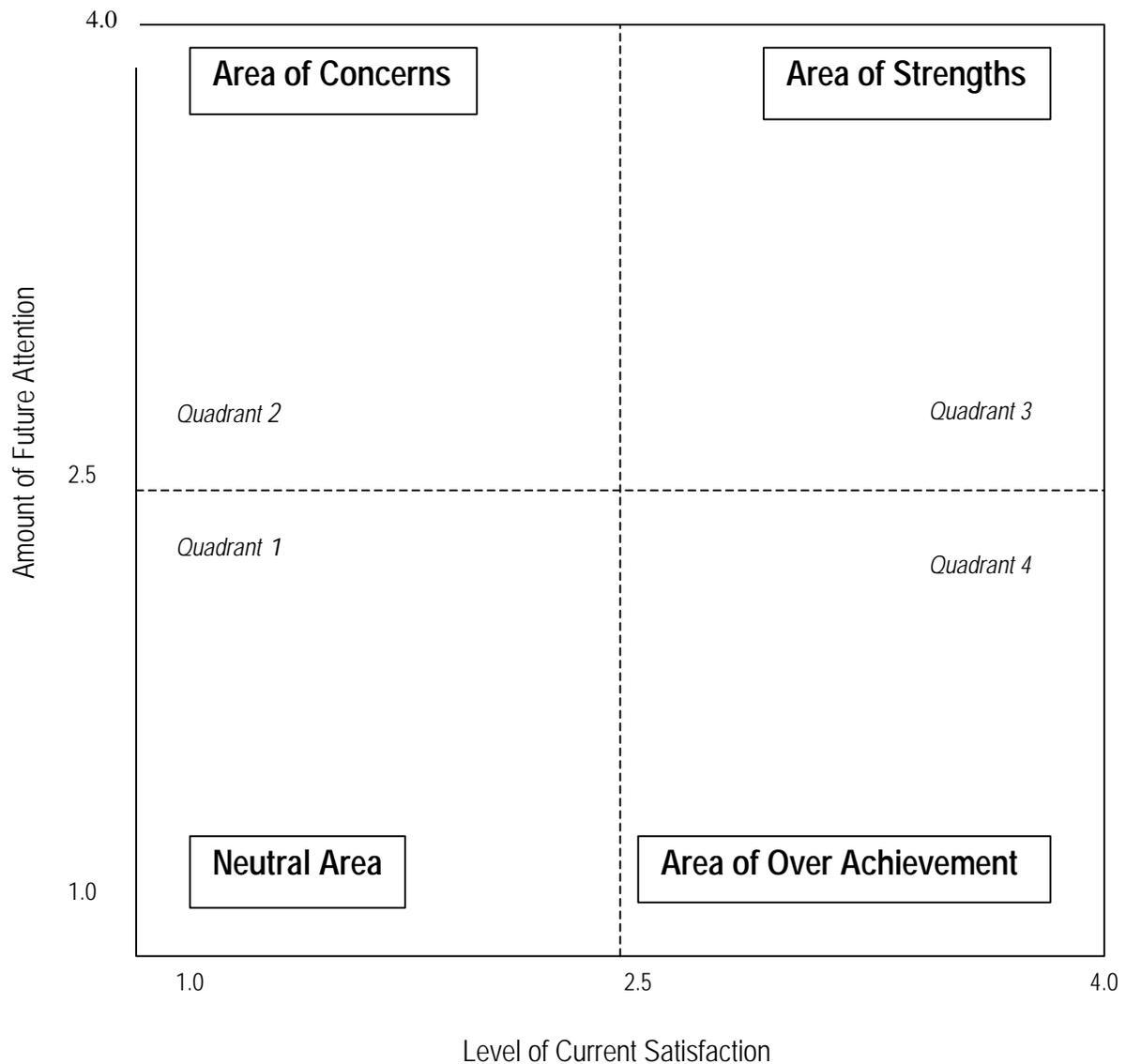
Discrepancy analysis is commonly used in helping make decisions about priorities in performance management. As agencies survey the broad scope of their activities and responsibilities, they often find it difficult to assemble information that is relevant to the decisions posed by performance management requirements. Re-engineering the organization usually begins with a full understanding of the management and implementation processes currently being used and their impact. These impacts include how the audience served evaluates the outcomes of those processes, experienced as “services provided.” Besides objective measures of performance in producing such services, perceptual data from constituents that quantify their evaluation of these services in comparison to their expectations is very helpful. Further, such data provide useful benchmarks for future comparison to determine if actual progress is being made and is being perceived in the experiences of constituents. The discrepancy between evaluation of current status (satisfaction) and expectations of performance in the future is the indicator on which to focus in this report.

### *5.1 Discrepancy Analysis*

*Figure 5.1* represents a graphical view used to plot the results of a multi-item discrepancy analysis as was conducted in the CSQS study for MoDOT. Each axis of the graphic plot represents one of the two dimensions of constituent perception investigated in this study. The vertical axis of the graphic presents the plot of the average ratings for the amount of future attention constituents expected MoDOT to give to various areas of work. The horizontal axis represents the average ratings given to current satisfaction for each of the items. As both satisfaction and future attention perceptions were measured on a four-point scale (1-4), 2.5 represents the midpoint value of each axis and scale.

When the discrepancy score computed for each item is plotted in this graphic, the items can be arranged into four quadrants. In Quadrant 1, where future attention ratings exceed current levels of satisfaction, MoDOT should be concerned that constituents perceive performance is not as high as expected.

Figure 5.1: Analytical Framework for Understanding Discrepancy Scores



In Quadrants 3 and 4 where ratings of current satisfaction exceed expected levels of future attention, MoDOT is either a strong performer or perceived to be over-achieving. Which quadrant the rating falls in depends upon the absolute rating given to expected future attention; higher ratings show strength while lower average ratings show over-achievement. Where ratings for future attention and current satisfaction are both comparatively low (Quadrant 1), the agency should consider constituent attitudes to be mostly neutral about the specific areas rated.

Using this graphic display conceptually, agency managers can determine where resources may be directed to improve performance. Assuming no new resources are available, current resources levels devoted to area of strength or over-achievement could be redirected to areas of concern. Alternatively, new resources could be primarily directed toward areas of concern while efforts continue in those areas where the agency's performance is considered to be strongest. The specific nature of the area rated should also be considered; in some cases, education efforts may be necessary to change constituent perceptions or changes in procedures could make a difference with few additional resources required. Finally, perceptual information should always be combined with other performance indicators to assist management decision making. For example, a performance audit could determine the actual (average) time from project initiation to completion and compare these data to constituent perceptions of this area of performance. If the agency was perceived as strong in this area, a management priority would be maintaining performance on this aspect of work.

### ***5.2 Discrepancy Analysis of MoDOT Data***

Discrepancy information is presented in three ways in the following discussion. First the information is presented in tabular form, next in graphic form, and finally in a different graphic form that permits the study of differences in the discrepancy ratings by respondent characteristic. Each form of presentation provides some additional information to consider in decision making. Discrepancy information is analyzed by region and by respondent characteristics.

*Table 5.1* presents the 41 items contained in the survey ranked by the size of the discrepancy. The size and sign of the discrepancy is important. As shown in the computation method in *Figure 1.1*, when the respondents' ratings for expectation of future attention is larger than their ratings of current satisfaction, the discrepancy sign is negative. These results show that 31 of the 41 items have negative discrepancies. In other words, the MoDOT constituents who participated in the survey feel that overall the agency generally has room for improvement, and in some items, there is substantial room for improvement. These latter items include many of the same items discussed in Chapter 4 where the ratings for the amount of future attention to be given these areas was discussed—areas of highway maintenance and infrastructure durability, and management of resources. In some cases, the

**Table 5.1: Ranking of Discrepancy between Current Satisfaction and Future Attention Statewide and by Region**

Item #	Item	Entire State	Kansas City Area	St. Louis Area	Remainder of the State
39*	Repairing pavement surface promptly	1 (-1.17)	1 (-1.29)	1 (-1.25)	4 (-1.02)
37	Providing pavement that lasts a long time	2 (-1.06)	4 (-1.14)	2 (-1.12)	5 (-.96)
36	Using public funds in a cost effective manner	3 (-1.06)	5 (-1.00)	3 (-1.07)	2 (-1.08)
38	Maintaining the pavement so it provides a smooth ride	4 (-1.05)	3 (-1.17)	4 (-1.02)	3 (-1.03)
35*	Distributing transportation funds fairly to all areas of the state	5 (-.98)	9 (-.83)	6 (-.87)	1 (-1.14)
33*	Completing road and bridge repairs in a timely manner.	6 (-.94)	2 (-1.20)	5 (-1.00)	9 (-.76)
30	Improving existing highways to meet increasing traffic demands	7 (-.82)	13 (-.79)	10 (-.80)	6 (-.86)
32	Planning a project in a reasonable amount of time	8 (-.82)	6 (-.88)	7 (-.86)	10 (-.74)
27	Honoring commitments to provide and maintain Missouri's transportation system	9 (-.75)	12 (-.80)	15 (-.64)	7 (-.83)
34	Providing the public with adequate opportunities for input in project planning	10 (-.73)	8 (-.84)	9 (-.81)	12 (-.62)
25*	Building new highways to meet future demand	11 (-.73)	10 (-.82)	8 (-.81)	13 (-.60)
26*	Treating highway surfaces to resist skidding in wet weather near highways	12 (-.68)	14 (-.75)	11 (-.77)	15 (-.55)
40	Providing pedestrian or bicycle pathways on or adjacent to highways that are safe	13 (-.67)	7 (-.85)	12 (-.69)	14 (-.56)
28*	Providing shoulders that are adequate to pull of the road safely	14 (-.62)	19 (-.51)	19 (-.55)	8 (-.76)
29*	Providing sufficient transportation for those who don't or can't drive	15 (-.61)	11 (-.81)	14 (-.65)	16 (-.48)
24	Providing pavement markings that can be easily seen in wet weather	16 (-.61)	17 (-.54)	17 (-.60)	11 (-.66)
31	Providing Amtrak passenger rail service to meet your needs	17 (-.46)	20 (-.48)	20 (-.49)	17 (-.42)
23*	Providing crosswalks and signals that allow you to cross the highway safely	18 (-.45)	16 (-.56)	16 (-.60)	23 (-.24)
12*	Building bridges that last a long time	19 (-.42)	15 (-.68)	21 (-.48)	21 (-.24)

Note: \* Statistically significant ( $p \leq .01$ ) difference. For direction of significance, see *Table 7.3*.

**Table 5.1: Ranking of Discrepancy between Current Satisfaction and Future Attention  
Statewide and by Region (cont.)**

Item#	Item	Entire State	Kansas City Area	St. Louis Area	Remainder of the State
22	Providing sufficient passing opportunities on two-lane highways	20 (-.38)	21 (-.47)	25 (-.33)	18 (-.38)
18	Striping center lines and road edges to ensure safety	21 (-.37)	18 (-.52)	26 (-.31)	19 (-.35)
14*	Removing snow and ice efficiently	22 (-.37)	22 (-.43)	18 (-.55)	26 (-.16)
19	Lighting interchanges and bridges	23 (-.32)	23 (-.39)	24 (-.34)	20 (-.26)
10*	Having signs that can be easily seen at night or in bad weather	24 (-.27)	25 (-.36)	22 (-.44)	28 (-.06)
11	Building bridges that are wide enough to feel safe	25 (-.24)	24 (-.39)	29 (-.17)	22 (-.24)
17	Providing useful information about construction, repairs or road conditions	26 (-.21)	26 (-.30)	27 (-.24)	27 (-.14)
21*	Offering a toll free phone line that is useful	27 (-.20)	27 (-.27)	23 (-.35)	29 (-.03)
15	Communicating with the public in easy to understand language	28 (-.18)	29 (-.22)	31 (-.13)	25 (-.21)
9	Providing lanes that are wide enough for safe driving	29 (-.15)	31 (-.18)	35 (-.05)	24 (-.21)
16*	Keeping roadside free of litter and debris	30 (-.04)	28 (-.26)	33 (-.08)	32 (.12)
5*	Locating yellow signs so drivers have enough time to respond to them	31 (-.02)	32 (-.15)	30 (-.14)	33 (.16)
8	Using electronic message boards to advise drivers of delays or construction areas	32 (-.02)	33 (-.15)	36 (-.02)	31 (.07)
3*	Marking railroad crossings	33 (0)	30 (-.19)	34 (-.07)	34 (.17)
20*	Providing a sufficient number of safe commuter parking spaces to meet your needs	34 (.02)	35 (-.07)	28 (-.18)	37 (.28)
2*	Ensuring that traffic signals or lights are working	35 (.05)	34 (-.09)	32 (-.12)	36 (.27)
13	Mowing along roadways to improve appearance of the roadway	36 (.10)	37 (.16)	38 (.14)	30 (.02)
6	Providing a sufficient number of local and regional airports	37 (.15)	36 (.11)	37 (.06)	35 (.26)
4	Providing rest area services and facilities that meet my needs	38 (.28)	39 (.32)	40 (.18)	38 (.37)
1*	Placing orange construction signs to mark active work areas	39 (.30)	38 (.21)	39 (.17)	40 (.46)
7	Setting speed limits	40 (.49)	40 (.50)	41 (.52)	39 (.45)
41	Providing light rail routes, such as MetroLink, that meet your needs	N/A	N/A	13 (-.68)	N/A

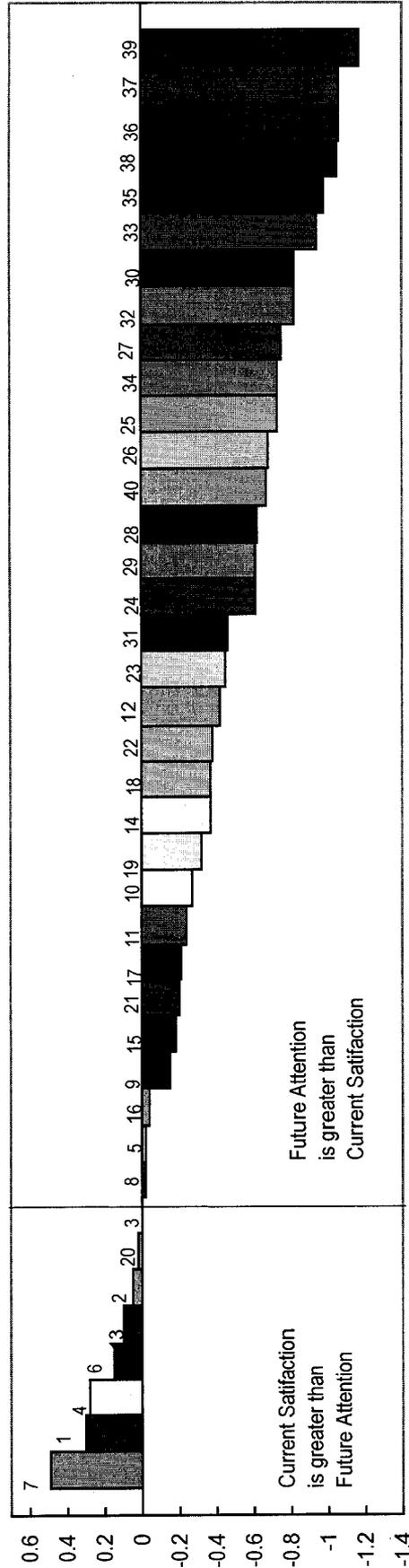
Note: \* Statistically significant ( $p \leq .01$ ) difference. For direction of significance, see Table 7.3.

discrepancy represents more than a full point on the four-point scale, a substantial discrepancy. However, for more than 60 percent of the items, the discrepancy is less than .50 on the four-point scale.

Examination of these results among the three regions, as compared to the state as a whole, indicates a remarkable amount of consistency among the top five items rated highest in discrepancy. In fact, the ten items with the highest discrepancy scores among all the regions and the total population surveyed are encompassed in only fourteen items. The information in *Figure 5.2* reproduces that in *Table 5.1* in a graphic form. As this information shows, on a statewide basis there are eight areas of performance where MoDOT is viewed by constituents as exceeding expectations. These areas include: Item 7 (providing a sufficient number of local/regional airports), Item 1 (placing orange construction signs to mark active work areas), Item 4 (providing rest area services and facilities to meet needs), Item 6 (setting speed limits), Item 13 (mowing along roadways to improve appearances), Item 2 (ensuring that traffic signals and lights are working), Item 20 (providing a sufficient number of commuter parking spaces), and Item 3 (marking railroad crossings). The other 32 areas received discrepancy scores that were negative; that is, desired future attention exceeded current satisfaction ratings. The two areas that received the highest negative discrepancy scores dealt with repairing and maintaining the highway pavement quickly and providing a durable surface.

*Figure 7.1*, *Figure 7.2*, and *Figure 7.3* correspond to and provide data for each region. The same general pattern of results, described above for the statewide data, holds true for the St. Louis region. There are some small differences in the results for the Kansas City and the Remainder of the State regions. MoDOT constituents in the Kansas City region feel there are performance discrepancies in the aspects of timeliness of repairs to highways and bridges. For the constituents in the Remainder of the State region, aspects that deal with the allocation and management of resources received the highest discrepancy scores. On the other hand, for this region, eleven of the 41 items received ratings that show satisfaction with current performance is higher than ratings of future attention. This would indicate a slightly more favorable overall perception of performance for constituents in this region.

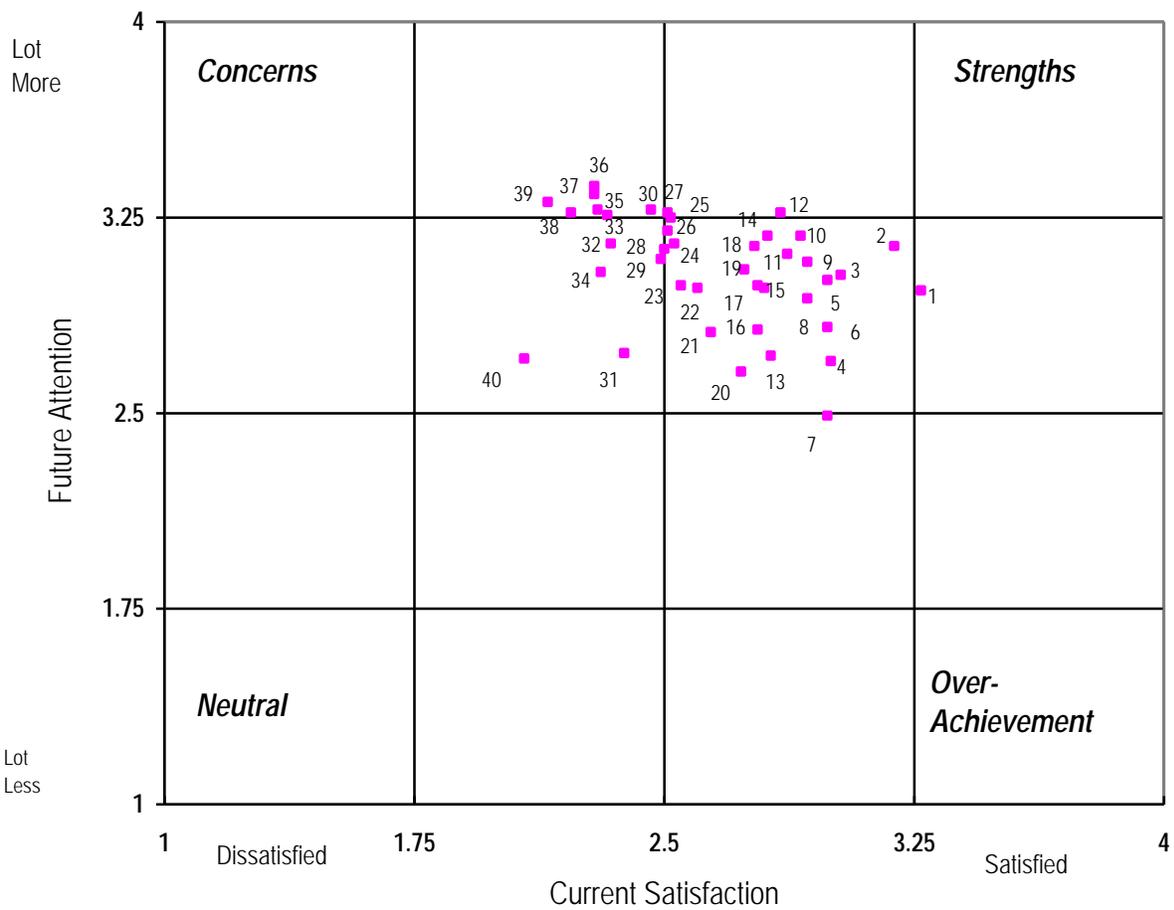
Figure 5.1: Mean Discrepancies between Current Satisfaction and Future Attention - Statewide



1. Placing orange construction signs to mark active work areas
2. Ensuring that traffic signals and lights are working
3. Marking railroad crossings
4. Providing rest area services and facilities that meet my needs
5. Placing yellow warning signs to assure sufficient response time
6. Providing a sufficient number of local/regional airports
7. Setting speed limits
8. Using electronic message boards to advise drivers of delays or construction areas.
9. Providing lanes that are wide enough for safe driving
10. Having signs that can be easily seen at night or in bad weather
11. Building bridges that are wide enough to feel safe
12. Building bridges that last long enough
13. Mowing along roadways to improve the appearance of the roadway
14. Removing snow / ice efficiently
15. Communicating with the public in easy to understand language
16. Keeping roadsides free of litter and debris
17. Providing useful information about construction, repairs or road conditions
18. Striping center lines and road edges to ensure safety
19. Lighting interchanges and bridges
20. Providing a sufficient number of commuter parking spaces
21. Offering a toll free phone line that is useful
22. Providing sufficient passing opportunities on two-lane highways
23. Providing crosswalks and signals that allow you to cross the highway safely
24. Providing pavement markings that can be easily seen in wet weather
25. Building new highways to meet future demand
26. Treating highway surfaces to resist skidding in wet weather
27. Honoring commitments to provide and maintain Missouri's transportation system
28. Providing shoulders that are adequate to pull off the road safely
29. Providing sufficient transportation for those who don't or can't drive
30. Improving existing highways to meet increasing traffic demands
31. Providing Amtrak passenger rail service to meet your needs
32. Planning a project in a reasonable amount of time
33. Completing road and bridge construction and repairs in a timely manner
34. Providing the public with adequate opportunities for input in project planning
35. Distributing transportation funds fairly to all areas of the state
36. Using public funds in a cost effective manner
37. Providing pavement that lasts a long time
38. Maintaining the pavement so it provides a smooth ride
39. Repairing pavement surface promptly
40. Providing pedestrian / bicycle pathways on or adjacent to highways that are safe.
41. Provide light rail such as MetroLink (St. Louis only).

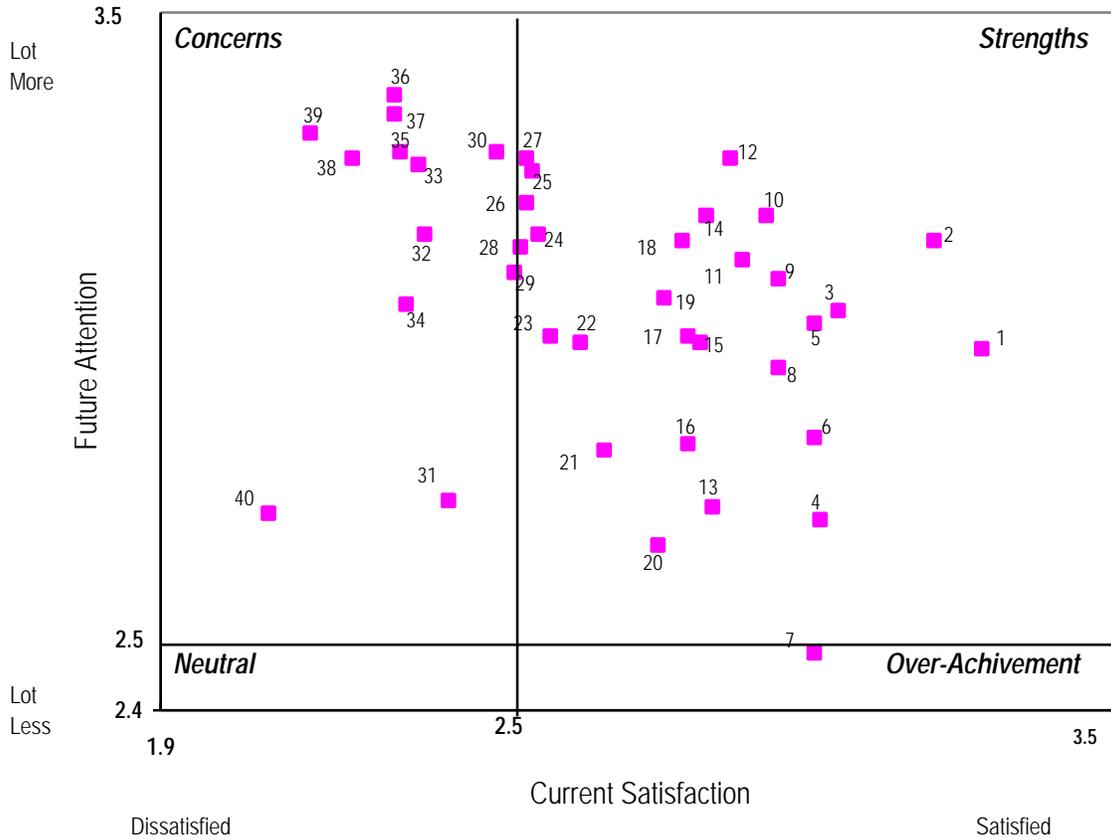
The graphic display presented in *Figure 5.2* is reproduced with the actual plots for the entire state survey population results in *Figure 5.3*. (An enhanced plot depicting the spacing of these items more clearly is shown in *Figure 5.3*.) The majority of the 40 items in the survey are plotted in the “Strengths” quadrant and twelve of the 40 are plotted in the “Concerns” quadrant. Clearly, the constituents surveyed for this study perceive MoDOT to be relatively strong in producing expected levels of performance.

**Figure 5.2: Plot of Discrepancies between Current Satisfaction and Future Attention - Statewide**



Those items shown in the “Strengths” quadrant appear related to the broad spectrum of work that MoDOT does. Basic factors related to safety on bridges and highways (Items 11, 3, 6, 9) and around intersections (for drivers and pedestrians) as well as providing adequate signage of different kinds (Items 1, 2, 5, 8, 10) are clearly among the agency’s

**Figure 5.3: Enhanced Plot of Discrepancies between Current Satisfaction and Future Attention - Statewide**



- |  |  |  |
|--|--|--|
| <ol style="list-style-type: none"> <li>1. Placing orange construction signs to mark active work areas</li> <li>2. Ensuring that traffic signals and lights are working</li> <li>3. Marking railroad crossings</li> <li>4. Providing rest area services and facilities that meet my needs</li> <li>5. Placing yellow warning signs to assure sufficient response time</li> <li>6. Providing a sufficient number of local/regional airports</li> <li>7. Setting speed limits</li> <li>8. Using electronic message boards to advise drivers of delays or construction areas.</li> <li>9. Providing lanes that are wide enough for safe driving</li> <li>10. Having signs that can be easily seen at night or in bad weather</li> <li>11. Building bridges that are wide enough to feel safe</li> <li>12. Building bridges that last long enough</li> <li>13. Mowing along roadways to improve the appearance of the roadway</li> <li>14. Communicating with the public in easy to understand language</li> <li>15. Removing snow / ice efficiently</li> </ol> | <ol style="list-style-type: none"> <li>16. Keeping roadsides free of litter and debris</li> <li>17. Providing useful information about construction, repairs or road conditions</li> <li>18. Striping center lines and road edges to ensure safety</li> <li>19. Lighting interchanges and bridges</li> <li>20. Providing a sufficient number of commuter parking spaces</li> <li>21. Offering a toll free phone line that is useful</li> <li>22. Providing sufficient passing opportunities on two-lane highways</li> <li>23. Providing crosswalks and signals that allow you to cross the highway safely</li> <li>24. Providing pavement markings that can be easily seen in wet weather</li> <li>25. Building new highways to meet future demand</li> <li>26. Treating highway surfaces to resist skidding in wet weather</li> <li>27. Honoring commitments to provide and maintain Missouri's transportation system</li> <li>28. Providing shoulders that are adequate to pull off the road safely</li> </ol> | <ol style="list-style-type: none"> <li>29. Providing sufficient transportation for those who don't or can't drive</li> <li>30. Improving existing highways to meet increasing traffic demands</li> <li>31. Providing Amtrak passenger rail service to meet your needs</li> <li>32. Planning a project in a reasonable amount of time</li> <li>33. Completing road and bridge construction and repairs in a timely manner</li> <li>34. Providing the public with adequate opportunities for input in project planning</li> <li>35. Distributing transportation funds fairly to all areas of the state</li> <li>36. Using public funds in a cost effective manner</li> <li>37. Providing pavement that lasts a long time</li> <li>38. Maintaining the pavement so it provides a smooth ride</li> <li>39. Repairing pavement surface promptly</li> <li>40. Providing pedestrian / bicycle pathways on or adjacent to highways that are safe.</li> <li>41. Provide light rail such as MetroLink (St. Louis only).</li> </ol> |
|--|--|--|

strengths. Constituents also appear to feel that the number of airports in the state is adequate (Item 7) and that highway rest areas (Item 4) are meeting their needs. General highway maintenance on shoulders (Items 13, 16), communicating effectively with the public (Items 15, 17), marking pavement (Item 18), and building durable bridges (Item 12) are other areas of agency strength. In sum, it appears that constituents feel that, for the kinds of things they see and experience daily on the highways and in other transportation experiences, MoDOT is a strong performer, at least the agency is perceived that way by constituents.

Areas of concern seem to be of a different nature. The items in the “Concerns” quadrant deal with the agency’s procedures for planning projects (Items 34, 32) and allocating resources (Items 36, 35, 27), and the quality of the highway pavement (Items 39, 38, 37). Other items in this quadrant include concerns about bicycle/pedestrian pathways along the highway (Item 40), meeting constituent needs for Amtrak services (Item 31), completing projects in a timely manner (Item 33), and providing sufficient transportation options for non-drivers (Item 29). Many of these areas of concern involve policy making and planning procedures instead of routine daily management of the infrastructure. The items related to forms of transportation other than highways may relate to the fact that the funding for MoDOT comes primarily from gasoline taxes. Decision making for other modes of transportation is not entirely MoDOT’s responsibility.

Examining the plots for each region demonstrates again that there are few substantial differences between regions and the state as a whole. *Figure 7.5, Figure 7.7, and Figure 7.9* correspond to *Figure 5.3* and provide data for each region. The composition of the items plotted in the “Concerns” quadrant is nearly identical across all regions, as compared to the statewide plot. Some items shift in relative ranking on the discrepancy indicator. The most noticeable changes of this type are “providing shoulders adequate to pull off road safely” (Item 28) for Remainder of the State and “providing pavement markings that can be easily seen in bad weather” (Item 25) for the St. Louis and Kansas City regions.

In many cases, there are significant differences between respondent ratings of level of current satisfaction and level of future attention by region. *Table 7.3* shows that on a statewide basis, there are significant differences between these two ratings for 31 of the 41 variables. In five instances there was a significant positive discrepancy, i.e., current satisfaction level is significantly higher than future attention. In 26 cases, there is a significant

negative discrepancy, i.e., current satisfaction level is significantly lower than future attention. *Table 7.3* also shows the occurrence of significant differences in current satisfaction and future attention ratings by region. Significant differences are found in 35 of 40 items for the Remainder of State region, 33 of 40 items for the Kansas City region, and 34 of 41 items for the St. Louis region. In all regions, the percentage of items where there are significantly higher levels of satisfaction than future attention is between 20 and 25 percent; the majority of cases show significantly higher levels of future attention than current satisfaction.

Further analysis of the discrepancy indicators was conducted to determine if subgroup factors other than region of the state had any effect on the pattern of responses. *Table 7.1* presents a summary of all significant subgroup differences identified for each of the 41 performance items. Four characteristics of respondents seem to make some difference regarding the discrepancy indicators. In particular, respondents who were in the middle-age category (40-59), were better educated (more than high school), had higher incomes (annual household income >\$50,000) and drove more than 20,000 miles annually, were more likely to respond with ratings that indicated higher (usually more negative) discrepancy scores than respondents in other categories for these characteristics. Other respondent characteristics, including gender and whether or not the respondent was a commercial driver, seemed to make less difference in the responses given, although there were some instances where these characteristics are associated with significant differences in the discrepancy rating.

## ***5.2 Summary***

As indicated elsewhere in this report, discrepancy analysis is useful for helping decision-makers judge their agency's performance. In the eyes of constituents, the discrepancy between their perceived satisfaction with current performance and their expectations for future performance can provide useful guides to assist agency managers and staff. These data are not sufficient, however, for making decisions given the complexities of situations faced by decision makers, both technical and political. The discrepancy information provided by constituents regarding performance can be very helpful in priority setting when matched with performance data such as related agency records in meeting technical specifications and cost effectiveness of management procedures.

The results of the analysis of discrepancy information computed from these survey data indicate that, MoDOT's performance in many aspects of its work is considered strong,

and perceived discrepancies are small or supportive of current practices. Approximately 25 percent of the 40 items included in the survey indicated, when plotted on a decision matrix, aspects of MoDOT's performance that could be considered real concerns.

The specific items included in the "concerns" quadrant related to maintenance of durable pavement surfaces, timeliness of repairs and construction planning and the procedures used in managing resources in the broad context. Even though most constituents are unlikely to be very familiar with the agency's policies and procedures at the highest levels of decision making and have information only from mass media, these kinds of items were most often of concern to respondents who participated in the survey. Those work aspects carried out at the district level are most likely to directly affect constituents and those aspects constituents typically rated as agency "strengths." Nevertheless, MoDOT now has specific benchmarks to use in measuring progress in changing perceptions where it appears necessary or desirable and has a better idea of specific measures that could be taken to address concerns.

Further, a conclusion that one may draw from the discrepancy analysis is that those constituents that are likely to be the primary stakeholders in agency performance—those who pay the majority of the taxes—tend to be the most critical of agency performance. There are some clues as to how this potential problem may be addressed in Chapter 6. However, it appears clear that MoDOT faces a substantial challenge in changing the perceptions of its most critical stakeholders, those constituents who feel they provide the majority of the financial resources and are likely the best informed about transportation affairs and infrastructure conditions.

## Chapter 6: MoDOT Performance Issues

This survey gathered some information that will help MoDOT decision-makers focus their future performance management efforts in addition to the discrepancy data. In many cases this information is supplemental and contributes to a deeper understanding of the discrepancy data, thereby assisting with its interpretation. In some cases, the additional data add a new dimension to the understanding to be gained. The data reviewed in this chapter include constituent perceptions regarding allocation of MoDOT resources for preservation or expansion of the existing highway system, the sources of information constituents rely upon about transportation affairs, the types of contacts constituents have had recently with MoDOT personnel, and some limited information regarding multi-modal issues.

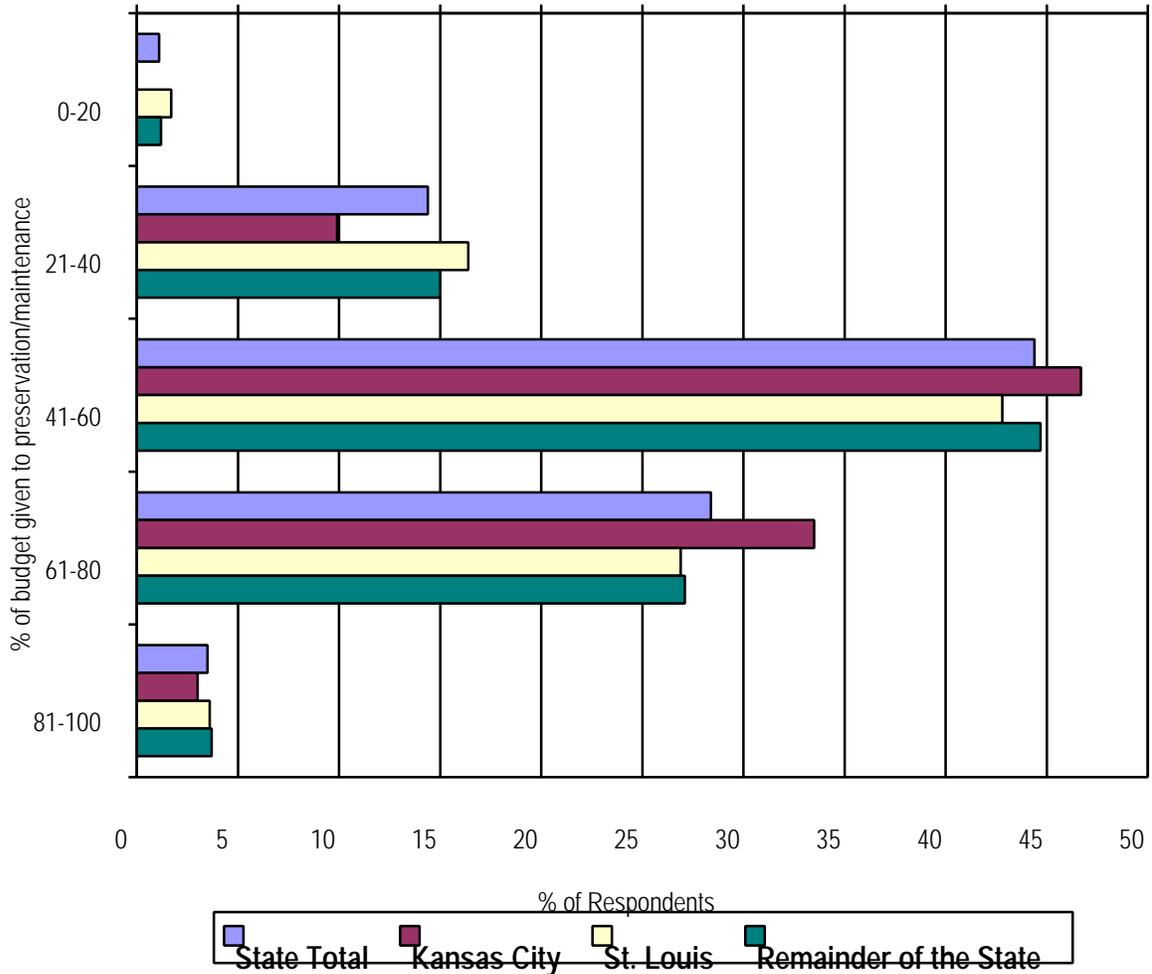
### *6.1 Preservation versus Expansion*

All respondents were asked, “If you had the opportunity to advise the Missouri Department of Transportation and could divide its budget between two items, what percentage of current funding would you recommend they spend on preserving and maintaining the existing highways and infrastructure [and what would you spend on] expanding and building new highways?” In this discussion, the first option will be referred to as “preservation” and the second alternative as “expansion.”

Statewide, citizens express preference for an emphasis on preservation, with the average response specifying a ratio of 58 percent for preserving and maintaining to 42 percent for expanding and building. The percentage breakdowns in the three sampled regions show a higher emphasis on preservation in the Kansas City region (60.5 percent preservation/39.5 percent expansion) and equal opinions in the St. Louis (57.2 percent preservation/42.8 percent expansion) and Remainder of the State (57.3 percent preservation and 42.7 percent expansion) regions.

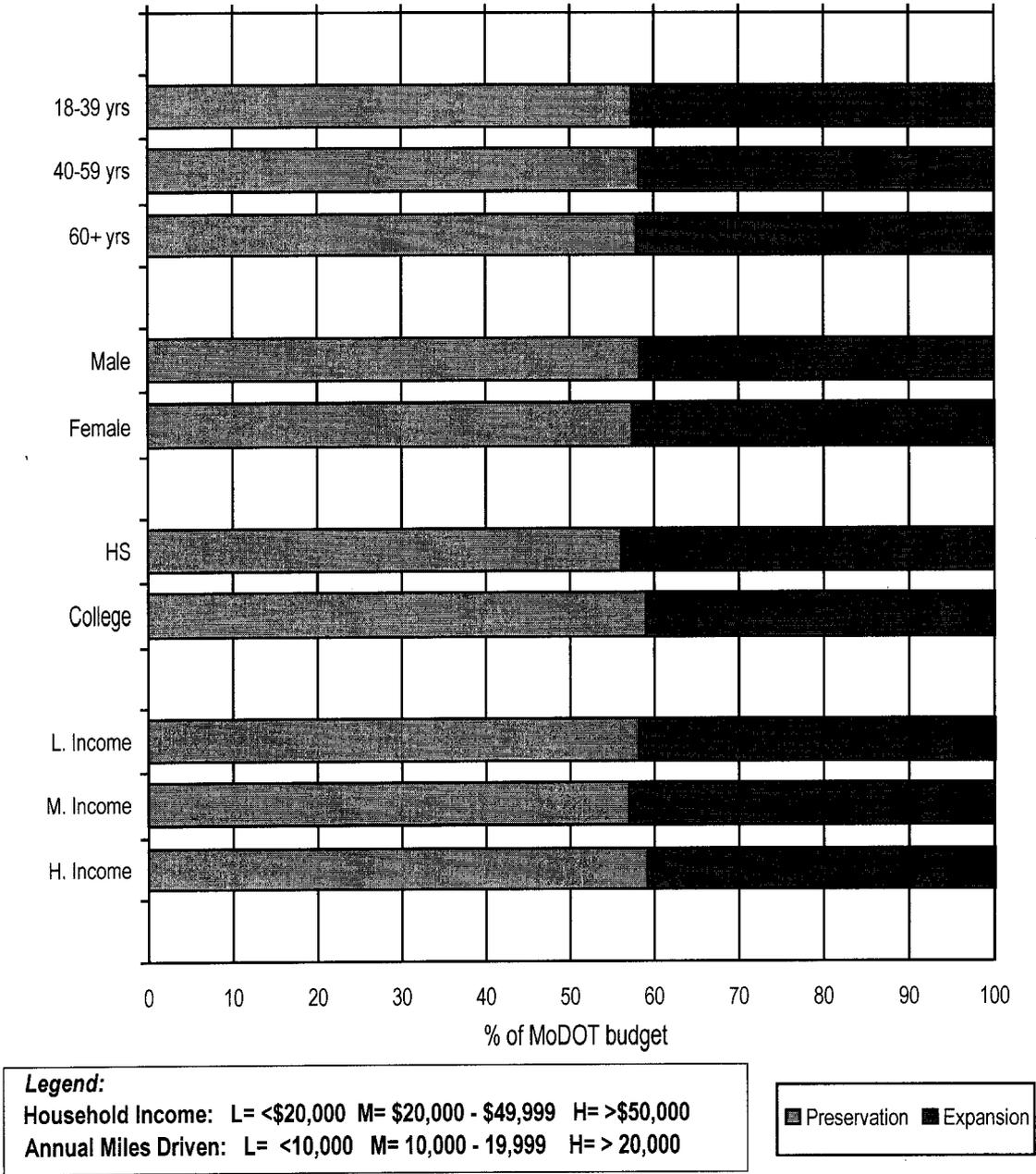
*Figure 6.1* shows the percentage of respondents in terms of the portion of MoDOT’s budget they believe should be devoted to preservation. The major differences between the regions are the under-representation of Kansas City in the 21-40 percent preservation category and its corresponding over-representation in the 61-80 percent category. This figure also indicates distributional bias in favor of greater efforts in preservation.

Figure 6.1: Statewide and Regional Preferences on MoDOT Budget Percentage for Preservation



Responses within other subgroups are pictured in *Figure 6.2*. Within regions, educational differences are significant in both Kansas City and Remainder of the State. The sole statewide significant difference between groups is that for education, with a significantly higher mean preference for preservation found among respondents with post-secondary educational experience.

**Figure 6.2: Subgroup Preferences for Division of MoDOT Budget for Preservation or Expansion**



No other significant subgroup differences exist on a statewide basis. Within regions, the only significant difference is between household income groups in the Kansas City region where higher income is associated with greater emphasis on preservation. Although not shown in *Figure 6.2*, it should be noted there are no significant differences on this issue among subgroups defined by miles driven or by whether or not respondents possess a commercial driving license. These data are presented in *Table 6.1*.

**Table 6.1: Allocation of MoDOT Resources to Preservation vs. Expansion by Subgroup**

		Percentage of Current Funding Recommended for (1) Preserving/ maintaining or (2) Expanding/ building new highways and infrastructure		
Characteristics	Subgroups	Preserve/ Maintain	Expand/ Build	Total N
Total Sample		57.91	42.19	1454
Region	Kansas City	60.43	39.57	295
	St. Louis	57.18	42.82	540
	Remainder of the State	56.96	43.04	631
Gender	Male	57.77	42.23	777
	Female	57.70	42.30	689
Age	18-39 years	58.17	41.83	453
	40-59 years	57.37	42.63	581
	60+ years	57.73	42.27	420
Education	HS or less	58.93	41.07	593
	Some college or more	56.93	43.07	873
Miles Driven	<10,000	57.66	42.34	355
	10,00-19,999	58.36	41.64	512
	>19,999	56.80	43.20	408
Income	<\$20,000	57.57	42.43	272
	\$20,000-49,999	57.46	42.54	635
	>\$49,999	57.82	42.18	417
Commercial Driver	Yes	59.22	40.78	143
	No	57.60	42.40	1321

## 6.2 Information Sources on MoDOT

In the MoDOT survey, respondents were asked to state their first and primary source of information on MoDOT, and then were given the option of adding up to two additional sources of information. Across the state, constituents rely on mass media outlets both as their primary sources of information and as information conduits in general (*Table 6.1*).

Television and newspapers are the top two sources statewide and in each of the three regions. In the Kansas City and St. Louis regions, approximately 46 percent of respondents cited television as their top source while another 31 percent relied on newspapers as their first source of information. In the Remainder of the State, the pattern is significantly different, although the favored sources remain the same. In this region, a little more than a third of respondents relied on newspapers (36.7 percent) and television (35.1 percent) as their primary source. Radio is the third choice in each Region, with the Remainder of the State

(18.5 percent) more reliant on this source than in either St. Louis (14.9 percent) or Kansas City (13.0 percent). No other primary source of information was identified by more than 2.1 percent of respondents in any region. Overall, only “personal experience/driving,” “friends and neighbors,” and “internet/www” attracted more than one percent of responses statewide.

**Table 6.1: Sources of Information on MoDOT – Statewide and by Region**

	Total Sample		Kansas City		St. Louis		Remainder Of The State	
	First Choice (%)	All choices (%)	First Choice (%)	All choices (%)	First Choice (%)	All choices (%)	First Choice (%)	All choices (%)
Television	41.6	81.6	46.2	87.0	46.0	82.5	35.1	77.9
Newspaper	33.4	69.3	30.4	68.0	31.6	68.8	36.7	70.6
Radio	16.0	50.3	13.0	46.8	14.9	46.2	18.5	55.9
Other print sources	0.3	1.4	0.6	1.9	0.0	1.6	0.3	1.0
Friends or neighbors	1.5	13.7	1.3	13.3	1.2	12.7	1.8	15.0
Toll-free MoDOT number	0.5	1.6	0.3	1.6	0.3	1.6	0.7	1.6
Internet/WWW	1.2	4.7	0.3	3.8	2.1	6.1	0.8	3.9
Telephone or fax	0.6	1.4	1.3	2.5	0.0	0.3	0.8	1.8
Driving and personal observation	2.0	5.0	3.2	6.0	0.9	3.8	2.4	5.5
Law enforcement personnel	0.7	1.7	0.9	1.3	0.2	0.5	1.1	2.9
AAA	0.4	0.8	0.6	1.3	0.5	0.9	0.2	0.5
Local govt.	0.2	1.3	0.0	2.5	0.2	0.5	0.3	1.3

Slightly different patterns emerge when considering all sources used for information. Mass media sources remain primary, with four of every five respondents utilizing television, approximately 70 percent getting information from newspapers, and about half citing radio. Some minor regional differences exist, including the continuing additional reliance on radio in Remainder of the State and higher levels of television use in the Kansas City region. More informal means of acquiring information, particularly from family and neighbors, is cited by about 13 percent statewide. In other words, while interpersonal contacts are the most important source of information for very few respondents, clearly news about MoDOT is exchanged in face-to-face interactions.

Among the minor other sources, a few trends should be noted. Use of the Internet and worldwide web is not a primary source of information for many. However, it is being utilized and most likely the frequency of use is increasing as the cost of access is reduced. Even at this point, more than six percent of respondents in the St. Louis Region cite the internet/www as one of their three utilized sources. People also depend on information encountered during their time spent traveling, particularly driving. Nearly five percent of respondents cited such sources as reading road signs and personal experience as a major source of information. The toll-free MoDOT number is used by about two percent of the respondent population. Finally, it should be noted that citizens in the Remainder of the State are more likely to contact local law enforcement agencies for information while local government is cited most frequently in the Kansas City region.

Subgroup responses reveal some interesting trends in respondent identification of their primary source of information (*Table 6.2*), particularly in the use of the popular media sources. Males and females are distinguished in their use of television and newspaper resources. Roughly equal percentage of males rely on newspapers (37.2 percent) and television (36.9 percent), while females are much more likely to depend on television (47.3 percent) than newspapers (28.9 percent). Men are also more likely to rely on radio.

In terms of age differences, most variation exists between respondents in the youngest age group (18-39 years) versus both older groups. Younger Missourians are much more likely to depend on television and, to a certain extent, radio as conduits of information. Respondents in the two older age groups utilize newspapers and television at roughly equal rates while radio is less important.

Table 6.2: Primary Sources of Information on MoDOT by Subgroup

Source	Gender		Age			Education		Annual Household Income (\$)		
	Male (%)	Fem. (%)	18-39 years (%)	40-59 years (%)	60 or more years (%)	HS or less (%)	More than HS (%)	Less than 20,000 (%)	20,000 to 49,999 (%)	50,000 or more (%)
Television	36.9	47.3	48.1	38.7	38.8	45.9	39.3	53.3	42.9	31.7
Newspaper	37.2	28.9	24.5	37.9	37.5	28.7	36.3	22.2	32.2	43.7
Radio	17.8	13.8	20.1	13.5	14.5	15.2	16.2	12.6	16.2	17.0
Other print sources	0.1	0.4	0	0.5	0.3	0.5	0	0.7	0	0
Friends or neighbors	1.0	2.1	1.7	1.4	1.0	2.0	1.2	3.0	1.1	1.3
Toll-free MoDOT number	0.5	0.4	0.4	0.3	0.8	0.5	0.4	0.7	0.6	0.2
Internet/WWW	0.8	1.6	1.9	1.1	0.5	.9	1.4	1.1	1.1	1.3
Telephone or fax	0.5	0.7	0	0.5	1.3	1.3	0.2	1.5	0.3	0.4
Driving and personal observation	1.9	2.1	1.5	2.9	1.3	2.0	2.0	1.1	2.2	2.4
Law enforcement personnel	0.5	1.0	0.2	1.0	1.0	0.7	0.7	0.4	1.1	0.4
AAA	0.5	0.3	0	0.2	1.3	0.4	0.4	0	0.6	0.4
Local govt.	0.2	0.1	0.4	0.2	0	0.2	0.2	0	0.2	0.2

Education and income subgroup differences follow similar patterns. Respondents with less education depend more on television (45.9 percent) than newspapers (28.7 percent) while constituents with post-secondary educational experience rely roughly equally on television (39.3 percent) and newspapers (36.3 percent). Both educational levels rely on use of radio at similar levels of use. Similarly, respondents in the lowest income group (< \$10,000 annual household income) are the most dependent on television (53.3 percent) and least reliant on newspapers (22.2 percent) and radio (12.6 percent), of all subgroups examined in the analysis. Increasing dependence on newspapers and radios is correlated with higher income categories. In the highest income category (\$50,000 or more annual income), newspapers have considerably outpaced television as a primary source of information on MoDOT. Within this group, dependence on television (31.7 percent) is the lowest of any subgroup and reliance on newspapers (43.9 percent) is the highest.

The numbers of respondents who used non-popular media sources is too small to make any judgements of inter-group differences. It is of interest to note the patterns that exist, for example, that Internet/www use is higher among younger respondents, females, and those with higher education levels. Since no source is cited as a primary conduit by more than 3 percent of any group, however, research on trends characterizing their users will require a more targeted research design and assessment.

### ***6.3 Contacting MoDOT***

All survey respondents were asked if they had “personally contacted MoDOT about any issue within the past 12 months.” Further, each person was provided the opportunity to describe up to three separate contacts. Statewide, 146 individuals reported contacting MoDOT, and these individuals reported a total of 180 interactions. *Table 6.1* reports the reasons for contacts. The most striking result is the fact that 44 percent of all contacts were made to register a complaint. Other frequent reasons for interacting with MoDOT were to request information on roads (21.1 percent), to inform the agency of a problem (9.4 percent), and to request transportation assistance (6.1 percent).

**Table 6.1: Reasons for Contacting MoDOT – Statewide and by Region  
(N=180)**

	Total Sample*	Kansas City	St. Louis	Remainder of the State
Register a complaint	43.9	29.0	53.7	41.5
Obtain road information	21.1	29.0	10.4	26.8
Inform MoDOT of problem	9.4	9.7	10.4	8.5
Request transportation assistance	6.1	9.7	7.5	3.7
Obtain detour or construction area information	1.1	0.0	0.0	2.4
Learn more about a specific project	3.9	3.2	3.0	4.9
Participate in project planning process	2.8	3.2	3.0	2.4
"Motorist Assist"	0.6	0.0	1.5	0.0
Other*	11.1*	16.1	10.4	9.8

NOTE: This table reports on 180 contacts from 146 individuals (or 9.2% of the total sample); of these respondents, 25 are from the Kansas City region, 55 are from the St. Louis region, and 66 are from the Remainder of the State.

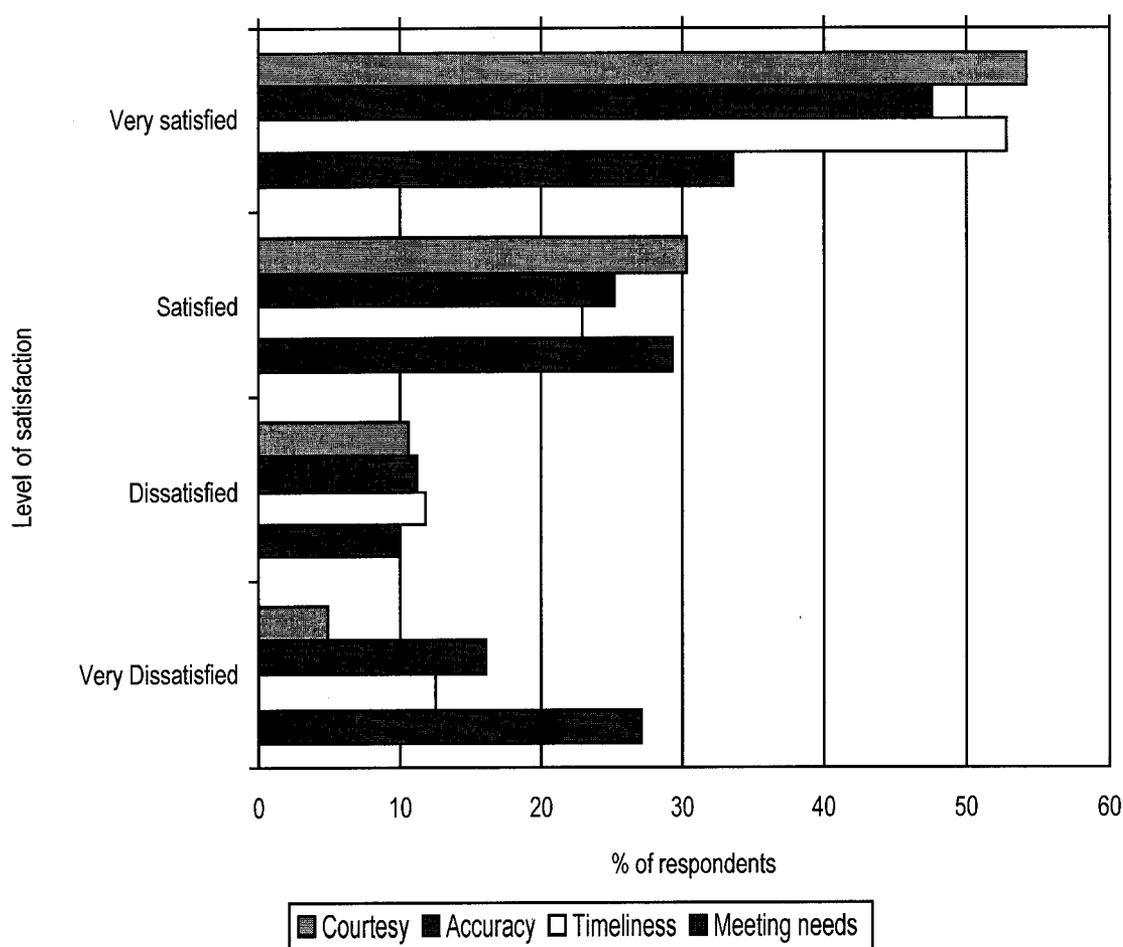
\* - "Other" responses include requests for maps, bus schedules, and miscellaneous inquiries.

There are some strong differences between regions, but it should be noted that the numbers of respondents who contacted MoDOT are relatively small. Contacts from the Kansas City region are generally equally divided between reporting a problem or registering a complaint and seeking additional information about roads, projects, or transportation needs. St. Louis respondents in the survey pool were by far the most likely to contact MoDOT to register a complaint or report a problem. Inquiries for various types of information and assistance were proportionally lower from this region. Finally, contacts made from the Remainder of the State fall between the patterns of the two metropolitan regions. The percentage of those calling to register a complaint (41.5 percent) is midway between the corresponding percentages for Kansas City (29 percent) and St. Louis (53.7 percent) while

requests for road information make up more than a quarter of the Remainder of the State requests.

Five follow-up questions were asked of each respondent who contacted MoDOT. A general inquiry asked if the respondent was successful, not successful, or did not know/remember “obtaining the information or a solution.” On a statewide level, 71.3 percent reported success and 28.7 percent claimed they were not successful. Rates of success were higher in Remainder of the State (74.2 percent) and Kansas City (73.1 percent) than in St. Louis (67.2 percent), where there was a higher frequency of calls to register complaints and a lower frequency of responses for information. Four additional questions asked respondents to rate their levels of satisfaction with the courtesy of MoDOT employees, accuracy of information, timeliness of response, and “MoDOT’s response meeting your needs.” As shown in *Figure 6.1*, MoDOT received generally higher ratings for the attributes of courtesy and timeliness than for accuracy and resolution of needs.

**Figure 6.1: Respondent Satisfaction with MoDOT Responses to Citizen Contacts**



Close to 80 percent of all respondents expressed satisfaction with the courtesy of MoDOT employees and the timeliness of the agency's response to their inquiry. The level of satisfaction drops to about 70 percent for the accuracy of the information provided and to about 60 percent for meeting citizens' needs. More than one-quarter of respondents remained "very unsatisfied" with the overall resolution of their contact. Although these numbers are too small for statistical analysis, it is not surprising to note that the highest frequency of dissatisfied constituents were those who called to complain about a problem while those most satisfied contacted MoDOT in order to request information about road conditions.

#### ***6.4 Summary***

The information gained from this analysis indicates that MoDOT's constituents were generally supportive of a small majority of agency resources being devoted to preservation and maintenance of the existing infrastructure as opposed to new construction. The proportion here is roughly 60 percent-40 percent in support of preservation. Except for education and location in the Kansas City sample region, no respondent characteristics made a significant difference in this result and regional differences were not substantial either. As a rough guide, this proportional distribution of resources may be useful. (It is not known what proportion of current resources are actually dedicated to preservation.)

Readers should recall the discussion of discrepancy differences by respondent characteristics and compare that information to the sources of information about MoDOT that constituents depend upon. Because the respondents who were the most critical of MoDOT's performance (i.e., assigned higher discrepancy scores) were more educated, middle-aged, had higher incomes and tended to drive more miles than other respondents, it should be noted that this group most often depends upon the newspaper and radio for information about transportation activities and issues. Departmental efforts to educate and inform constituents should pay particular attention to this relationship. While other forms of mass media cannot be ignored, television for example—and perhaps electronic means in the near future—clearly, substantial attention should be paid to these forms of communication with MoDOT's constituents.

The number of respondents reporting direct contact with MoDOT was very small, less than 10 percent of those interviewed in this study. If this represents a general level of demand for information, it still represents a tremendous number of contacts with the agency in a year's time. More importantly, most people reporting such contacts did so to register a complaint with about half as many people using their contacts to obtain information. Over 70 percent of those contacting MoDOT for any reason reported that they had been successful in obtaining information desired or in getting a problem resolved satisfactorily. It seems strange that so few respondents rated the toll-free telephone number that MoDOT makes available as a satisfactory service and constituents must be using other means of contact, perhaps directly with local MoDOT offices or staff, to obtain information or service. This situation appears to require additional study regarding a more precise determination of the nature and method of contacting MoDOT. It would also suggest a thorough review of the utility of the toll-free phone line and the service center concept where these kinds of calls are routed.

In addition, there is some significant evidence that MoDOT constituents expect the agency to play a more satisfactory role in several areas of transportation besides highways. The Missouri General Assembly designated MoDOT as the agency responsible for all transportation issues in the state over a decade ago. As yet, funding to support this expanded mandate has not been made available in adequate amounts to accomplish much change. Yet, respondents to the survey clearly indicated that they expected greater attention to be paid (by MoDOT) to: improvements to the light rail system recently initiated in the St. Louis region, provision of bicycle and pedestrian pathways along highways in urban areas, and increasing access and services to Amtrak rail service. Especially important is the evidence that suggests the light rail system is especially important to respondents who had less education and income, and did not drive much, thereby depending on alternative forms of transportation in their lives.

## **Chapter 7: Reference Appendix**

**Table 7.1: List of CSQS Advisory Committee Members**

Listed in alphabetical order are the members of the CSQS Advisory Committee.

<b>Name</b>	<b>Unit/Division</b>	<b>Location</b>	<b>City</b>
Scott Bachman	Planning	District 7	Joplin
Jeffrey Briggs	Public Affairs	General Headquarters	Jefferson City
Sue Cox	Public Affairs	General Headquarters	Jefferson City
Steve Miller	Public Affairs	District 3	Hannibal
Ernie Perry	Design	General Headquarters	Jefferson City
Ray Purvis	Research, Development and Technology	General Headquarters	Jefferson City
Jim Radmacher	Research, Development and Technology	General Headquarters	Jefferson City
Mike Rinehart	Administrative	District 7	Nevada
Kent VanLanduyt	Planning	General Headquarters	Jefferson City

## Table 7.2: Listing of Stakeholder Organizations Interviewed

Presented below is an alphabetical listing of the stakeholder organizations interviewed.

AAA Auto Club of Missouri  
Associated General Contractors of Missouri  
Bi-State Development Agency  
Boone County Fire District  
East-West Gateway Coordinating Council  
House and Senate State Legislators (4)  
Kansas City Area Transportation Authority  
Metropolitan Planning Organization  
Mid-America Regional Council  
Missouri Association of Council of Government  
Missouri Association of Counties  
Missouri Farm Bureau  
Missouri Municipal League  
Missouri Transportation and Development Council  
OATS  
Springfield Area Transportation Study Organization  
St. Joseph Public Works and Transportation Department

**Table 7.3: Summary of Data on Each of the 41 Performance Items**

*Introduction:* The following tables provide statewide and regional current satisfaction, future attention, and discrepancy scores for each of the 41 performance items assessed in the survey. In addition, the tables contain the following information:

“T-test (Current Satisfaction vs. Future Attention)” – Tests of significant difference were run between the means of current satisfaction and future attention for the statewide and regional samples. An asterisk (\*) in any table signifies that there is at least a < .01 level of significant difference in the two scores.

“Significant subgroup differences” – Current satisfaction, future attention, and discrepancy means for each item were compared among various subgroups. The tables report all cases where there is at least a < .01 level of significant difference. The following subgroups and designations are used below:

Subgroup	Designation	Number (N)*
Region	Kansas City St. Louis Remainder of the State	KC StL RS 334 605 642
Gender	Male Female	Male Female 868 712
Age	18-39 years 40-59 years 60 years and older	Age-L Age-M Age-H 497 642 419
Education	HS grad or less At least some college	HS C 610 964
Income (Household in 1998)	<\$20,000 \$20,000-\$49,999 \$50,000 or more	Income-L Income-M Income-H 296 658 468
Annual miles driven	<10,000 10,000-19,999 >20,000	Miles-L Miles-M Miles-H 531 560 487
Commercial License	Yes No	Com-Y Com-N 150 1430

### Item 1 - Placing orange construction signs to mark active work areas

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	3.27	3.19	3.22	3.36
Significant subgroup differences	RS > KC, RS > StL			
Future Attention	2.97	2.98	3.04	2.90
Significant subgroup differences	None			
Discrepancy	.30	.21	.17	.46
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	RS > StL			

Table 7.3: Summary of Data on Each of the 41 Performance Items (cont.)

**Item 2 - Ensuring that traffic signals or lights are working**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	3.19	3.09	3.09	3.33
Significant subgroup differences	RS > KC, RS > StL			
Future Attention	3.14	3.19	3.20	3.05
Significant subgroup differences	None			
Discrepancy	.05	-.09	-.12	.27
T-test (Current Satisfaction vs. Future Attention)			*	*
Significant subgroup differences	RS > StL, RS > KC			

**Item 3 - Marking railroad crossings**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	3.03	2.92	2.98	3.12
Significant subgroup differences	RS > KC, Age-L > Age-M, Age-L > Age-H			
Future Attention	3.03	3.12	3.06	2.94
Significant subgroup differences	None			
Discrepancy	0	-.19	-.07	.17
T-test (Current Satisfaction vs. Future Attention)				*
Significant subgroup differences	RS > KC, Females > Males, Age-L > Age-M, Age-L > Age-H			

**Item 4 - Providing rest area services and facilities that meet my needs**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	3.00	3.04	2.94	3.04
Significant subgroup differences	None			
Future Attention	2.70	2.71	2.74	2.66
Significant subgroup differences	HS > C, Age-L > Age-M, Age-L > Age-H, Income-L > Income-M, Income-L > Income-H, Miles-L > Miles-H			
Discrepancy	.28	.32	.18	.37
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	C > HS			

**Item 5 - Locating yellow signs so drivers have enough time to respond to them**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.99	2.92	2.94	3.08
Significant subgroup differences	RS > StL			
Future Attention	3.01	3.08	3.07	2.92
Significant subgroup differences	None			
Discrepancy	-.02	-.15	-.14	.16
T-test (Current Satisfaction vs. Future Attention)			*	*
Significant subgroup differences	RS > KC, RS > StL			

Table 7.3: Summary of Data on Each of the 41 Performance Items (cont.)

**Item 6 - Providing a sufficient number of local and regional airport**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.99	3.07	3.01	2.91
Significant subgroup differences	None			
Future Attention	2.49	2.55	2.49	2.46
Significant subgroup differences	HS > C, Income-L > Income-H, Miles-L > Miles-H			
Discrepancy	.49	.50	.52	.44
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Males > Females, Age-L > Age-H			

**Item 7 - Setting speed limits**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.99	2.98	2.95	3.03
Significant subgroup differences	None			
Future Attention	2.83	2.88	2.88	2.77
Significant subgroup differences	Females > Males, Income-L > Income-H			
Discrepancy	.15	.11	.06	.26
T-test (Current Satisfaction vs. Future Attention)	*			*
Significant subgroup differences	Age-L > Age-H, Miles-H > Miles-L			

**Item 8 - Using electronic message boards to advise drivers of delays or construction areas**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.93	2.79	2.98	2.96
Significant subgroup differences	STL > KC			
Future Attention	2.94	2.93	3.00	2.89
Significant subgroup differences	None			
Discrepancy	-.02	-.15	-.02	.07
T-test (Current Satisfaction vs. Future Attention)				
Significant subgroup differences				

**Item 9 - Providing lanes that are wide enough for safe driving**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.93	2.92	3.01	2.85
Significant subgroup differences	STL > RS			
Future Attention	3.08	3.11	3.07	3.07
Significant subgroup differences	Females > Males			
Discrepancy	-.15	-.18	-.05	-.21
T-test (Current Satisfaction vs. Future Attention)	*	*		*
Significant subgroup differences				

Table 7.3: Summary of Data on Each of the 41 Performance Items (cont.)

**Item 10 - Having signs that can be easily seen at night or in bad weather**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.91	2.85	2.82	3.03
Significant subgroup differences	RS > KC, RS > StL			
Future Attention	3.18	3.23	3.25	3.09
Significant subgroup differences	RS > KC, RS > StL, Females > Males			
Discrepancy	-.27	-.36	-.44	-.06
T-test (Current Satisfaction vs. Future Attention)	*	*	*	
Significant subgroup differences	RS > KC, RS > StL			

**Item 11 - Building bridges that are wide enough to feel safe**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.87	2.73	2.97	2.85
Significant subgroup differences	StL > KC			
Future Attention	3.11	3.11	3.13	3.10
Significant subgroup differences	None			
Discrepancy	-.24	-.39	-.17	-.24
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences				

**Item 12 - Building bridges that last a long time**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.85	2.64	2.83	2.97
Significant subgroup differences	StL > KC, RS > KC, HS > C, Income-L > Income-H			
Future Attention	3.27	3.32	3.31	3.20
Significant subgroup differences	None			
Discrepancy	-.42	-.68	-.48	-.24
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	RS > KC, HS > C, Income-L > Income-H			

**Item 13 - Mowing along roadways to improve appearance of the roadway**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.82	2.81	2.84	2.81
Significant subgroup differences	Females > Males			
Future Attention	2.72	2.65	2.70	2.78
Significant subgroup differences	HS > C, Income-L > Income-H			
Discrepancy	.10	.16	.14	.02
T-test (Current Satisfaction vs. Future Attention)	*			
Significant subgroup differences	Age-L > Age-H, HS > C			

Table 7.3: Summary of Data on Each of the 41 Performance Items (cont.)

**Item 14 - Removing snow/ice efficiently**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.81	2.75	2.69	2.96
Significant subgroup differences	RS > KC, RS > StL, Age-H > Age-L, Age-H > Age-M			
Future Attention	3.18	3.19	3.24	3.11
Significant subgroup differences	Age-L > Age-H			
Discrepancy	-.37	-.43	-.55	-.16
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	RS > StL, Age-H > Age-L, Age-H > Age-M			

**Item 15 - Communicating with the public in easy to understand language**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.80	2.75	2.85	2.79
Significant subgroup differences	Age-L > Age-M, Age-L > Age-H			
Future Attention	2.98	2.99	2.97	2.98
Significant subgroup differences	None			
Discrepancy	-.18	-.22	-.13	-.21
T-test (Current Satisfaction vs. Future Attention)	*	*		*
Significant subgroup differences	Age-L > Age-M, Age-L > Age-H			

**Item 16 - Keeping roadside free of litter and debris**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.78	2.65	2.77	2.86
Significant subgroup differences	RS > KC			
Future Attention	2.82	2.92	2.86	2.74
Significant subgroup differences	HS > C, Income-L > Income-H			
Discrepancy	-.04	-.26	-.08	.12
T-test (Current Satisfaction vs. Future Attention)		*		
Significant subgroup differences	RS > KC, C > HS			

**Item 17 - Providing useful information about construction, repairs or road conditions**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.78	2.70	2.79	2.81
Significant subgroup differences	Females > Males, Age-H > Age-L, Age-H > Age-M, HS > C, Income-L > Income-H			
Future Attention	2.99	3.00	3.02	2.94
Significant subgroup differences	None			
Discrepancy	-.21	-.30	-.24	-.14
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	None			

Table 7.3: Summary of Data on Each of the 41 Performance Items (cont.)

**Item 18 - Painting center lines and road edge to ensure safety**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.77	2.70	2.80	2.78
Significant subgroup differences	None			
Future Attention	3.14	3.21	3.11	3.13
Significant subgroup differences	Age-L > Age-M, Age-H > Age-M, Income-L > Income-M			
Discrepancy	-.37	-.52	-.31	-.35
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Age-L > Age-M, Age-H > Age-M			

**Item 19 - Lighting interchanges and bridges**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.74	2.71	2.76	2.72
Significant subgroup differences	None			
Future Attention	3.05	3.10	3.10	2.96
Significant subgroup differences	Females > Males			
Discrepancy	-.32	-.39	-.34	-.26
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences				

**Item 20 - Providing a sufficient number of safe commuter parking spaces to meet your needs**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.73	2.61	2.62	2.89
Significant subgroup differences	RS > KC			
Future Attention	2.66	2.67	2.77	2.54
Significant subgroup differences	StL > RS, KC > RS, Females > Males, Age-H > Age-M, HS > C, Income-L > Income-M, Income-L > Income-H, Miles-L > Miles-M, Miles-L > Miles-H			
Discrepancy	.02	-.07	-.18	.28
T-test (Current Satisfaction vs. Future Attention)			*	*
Significant subgroup differences	RS > KC, RS > StL, Males > Females, Income-H > Income-L, Miles-M > Miles-L, Miles-H > Miles-L			

**Item 21 - Offering a toll free phone line that is useful**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.64	2.65	2.57	2.71
Significant subgroup differences	HS > C			
Future Attention	2.81	2.86	2.85	2.74
Significant subgroup differences	Females > Males, HS > C, Income-L > Income-M, Income-L > Income-H, Miles-L > Miles-M, Miles-L > Miles-H			
Discrepancy	-.20	-.27	-.35	-.03
T-test (Current Satisfaction vs. Future Attention)	*	*	*	
Significant subgroup differences	RS > StL			

Table 7.3: Summary of Data on Each of the 41 Performance Items (cont.)

**Item 22 - Providing sufficient passing opportunities locations on two-lane highways**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.60	2.55	2.61	2.62
Significant subgroup differences	Age-L > Age-M			
Future Attention	2.98	3.03	2.94	3.00
Significant subgroup differences	Females > Males			
Discrepancy	-.38	-.47	-.33	-.38
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Age-L > Age-M			

**Item 23 - Providing crosswalks and signals that allow you to cross the highway safely**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.55	2.45	2.45	2.69
Significant subgroup differences	RS > KC, RS > StL, Males > Females, HS > C			
Future Attention	2.99	3.01	3.04	2.93
Significant subgroup differences	Females > Males, HS > C			
Discrepancy	-.45	-.56	-.60	-.24
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	RS > KC, RS > StL, Females > Males, Miles-H > Miles-L			

**Item 24 - Providing pavement markings that can easily be seen in wet weather**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.53	2.46	2.48	2.60
Significant subgroup differences	Age-H > Age-M, HS > C, Income-L > Income-M, Income-L > Income-H			
Future Attention	3.25	3.29	3.30	3.19
Significant subgroup differences	None			
Discrepancy	-.73	-.82	-.81	-.60
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Age-L > Age-M, Age-H > Age-M, HS > C, Income-L > Income-M, Income-L > Income-H, Miles-L > Miles-M, Miles-L > Miles-H			

**Item 25 - Building new highways to meet future demand**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.53	2.57	2.55	2.49
Significant subgroup differences	Females > Males, Age-L > Age-M, HS > C, , Income-L > Income-M, Income-L > Income-H, Income-M > Income-H, Mile-L > Miles-H			
Future Attention	3.15	3.11	3.16	3.15
Significant subgroup differences	None			
Discrepancy	-.61	-.54	-.60	-.66
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Age-H > Age-L, Age-H > Age-M, HS > C			

Table 7.3: Summary of Data on Each of the 41 Performance Items (cont.)

**Item 26 - Treating highway surfaces to resist skidding in wet weather**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.52)	2.48	2.47	2.56
Significant subgroup differences	Age-L > Age-M, Age-H > Age-M, HS > C, Income-L > Income-M, Income-L > Income-H			
Future Attention	3.20	3.24	3.24	3.14
Significant subgroup differences	None			
Discrepancy	-.68	-.75	-.77	-.55
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Age-H > Age-M, HS > C			

**Item 27 - Honoring commitments to provide and maintain Missouri's transportation system**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.51)	2.44	2.63	2.43
Significant subgroup differences	StL > RS, Age-L > Age-M, Age-L > Age-H			
Future Attention	3.27)	3.29	3.27	3.26
Significant subgroup differences	Age-L > Age-H, Age-M > Age-H, C > HS			
Discrepancy	-.75	-.80	-.64	-.83
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Age-L > Age-M, Age-H >, Age-M, HS > C, Income-L > Income-H, Miles-L > Miles-H			

**Item 28 - Providing shoulders that are adequate to pull off the road safely**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.51	2.62	2.57	2.39
Significant subgroup differences	KC > RS, StL > RS, Age-L > Age-M			
Future Attention	3.13	3.12	3.12	3.15
Significant subgroup differences	None			
Discrepancy	-.62	-.51	-.55	-.76
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	None			

**Item 29 - Providing sufficient transportation for those who don't or can't drive**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.50	2.39	2.56	2.50
Significant subgroup differences	Age-L > Age-M, Age-H > Age-M, HS > C, Income-L > Income-M, Income-M > Income-H			
Future Attention	3.09	3.18	3.17	2.97
Significant subgroup differences	KC > RS, StL > RS, Females > Males, Miles-L > Miles-H			
Discrepancy	-.61	-.80	-.65	-.48
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Males > Females, Age-H > Age-M, HS > C			

Table 7.3: Summary of Data on Each of the 41 Performance Items (cont.)

**Item 30 - Improving existing highways to meet increasing traffic demands**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.46	2.45	2.50	2.42
Significant subgroup differences	Age-L > Age-M, Age-H > Age-M, HS > C, Income-L > Income-M, Income-M > Income-H, Income L > Income-H, Mile-L > Miles-M, Mile-L > Miles-H			
Future Attention	3.28	3.23	3.30	3.28
Significant subgroup differences	Females > Males, Age-L > Age-H, Age-M > Age-H			
Discrepancy	-.82	-.79	-.80	-.86
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Age-H > Age-M, HS > C, Income-L > Income-M, Income-L > Income-H, Miles-L > Miles-M, Miles-L > Miles-H			

**Item 31 - Providing Amtrak passenger rail service to meet your needs**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.38	2.36	2.47	2.29
Significant subgroup differences	Age-L > Age-M, HS > C, Income-L > Income-H			
Future Attention	2.73	2.77	2.88	2.55
Significant subgroup differences	STL > RS, Females > Males, Age-H > Age-L, Income-L > Income-H			
Discrepancy	-.46	-.48	-.49	-.42
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Age-L > Age-M, Age-L > Age-H, HS > C			

**Item 32 - Planning a project in a reasonable amount of time**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.34	2.27	2.32	2.38
Significant subgroup differences	Age-L > Age-M, Age-H > Age-M, HS > C, Income-L > Income-H, Mile-L > Miles-H			
Future Attention	3.15	3.17	3.18	3.12
Significant subgroup differences	Age-M > Age-H			
Discrepancy	-.82	-.88	-.86	-.74
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Age-H > Age-M, HS > C, Income-L > Income-H, Miles-L > Miles-H, Miles-M > Miles-H, Com-N > Com-Y			

Table 7.3: Summary of Data on Each of the 41 Performance Items (cont.)

**Item 33 - Completing road and bridge repairs in a timely manner**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.33	2.13	2.30	2.45
Significant subgroup differences	RS > KC, Age-H > Age-L, Age-H > Age-M, HS > C, Income-L > Income-H, Mile-L > Miles-M, Miles-L > Miles-H			
Future Attention	3.26	3.33	3.30	3.19
Significant subgroup differences	Age-L > Age-H, Age-M > Age-H, C > HS, Miles-H > Miles-L			
Discrepancy	-.94	-1.20	-1.00	-.76
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	RS > KC, RS > StL, Age-H > Age-L, Age-H > Age-M, HS > C, Income-L > Income-H, Income-M > Income-H, Miles-L > Miles-H			

**Item 34 - Providing the public with adequate opportunities for input in project planning**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.31	2.18	2.26	2.41
Significant subgroup differences	RS > KC, HS > C, Income-L > Income-H			
Future Attention	3.04	3.04	3.07	3.00
Significant subgroup differences	None			
Discrepancy	-.73	-.84	-.81	-.62
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	None			

**Item 35 - Distributing transportation funds fairly to all areas of the state**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.30	2.33	2.41	2.20
Significant subgroup differences	StL > RS, Age-L > Age-M, HS > C, Com-N > Com-Y			
Future Attention	3.28	3.19	3.28	3.33
Significant subgroup differences	None			
Discrepancy	-.98	-.83	.87	-1.14
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	HS > C			

**Item 36 - Using public funds in a cost-effective manner**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.29	2.26	2.30	2.29
Significant subgroup differences	Age-L > Age-M, Age-H > Age-M			
Future Attention	3.37	3.33	3.39	3.38
Significant subgroup differences	Age-L > Age-H, Age-M > Age-H, C > HS, Income-H > Income-L			
Discrepancy	-1.06	-1.00	-1.07	-1.08
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Age-L > Age-M, Age-H > Age-M, HS > C, Income-L > Income-H, Miles-L > Miles-H			

Table 7.3: Summary of Data on Each of the 41 Performance Items (cont.)

**Item 37 - Providing pavement that lasts a long time**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.29	2.17	2.26	2.38
Significant subgroup differences	RS > KC, Age-L > Age-M, Age-H > Age-M, HS > C, Income-L > Income-H			
Future Attention	3.34	3.30	3.37	3.32
Significant subgroup differences	Income-H > Income-M, Miles-H > Miles-L			
Discrepancy	-1.06	-1.14	-1.12	-.96
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Age-L > Age-M, Age-H > Age-M, HS > C, Income-L > Income-H, Miles-L > Miles-H			

**Item 38 - Maintaining the pavement so it provides a smooth ride**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.22	2.12	2.27	2.22
Significant subgroup differences	Age-H > Age-M, HS > C, Income-L > Income-M, Income-L > Income-H			
Future Attention	3.27	3.29	3.28	3.25
Significant subgroup differences	Age-L > Age-H, Age-M > Age-H			
Discrepancy	-1.05	-1.17	-1.02	-1.03
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Age-H > Age-L, Age-H > Age-M, HS > C, Income-L > Income-H			

**Item 39 - Repairing pavement surface promptly**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.15	2.03	2.13	2.22
Significant subgroup differences	RS > KC, Age-L > Age-M, Age-H > Age-M, HS > C, Income-L > Income-H			
Future Attention	3.31	3.33	3.38	3.24
Significant subgroup differences	Age-L > Age-H, Age-M > Age-H, C > HS, Miles-H > Miles-L			
Discrepancy	-1.17	-1.29	-1.25	-1.02
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	RS > KC, RS > StL, Age-H > Age-L, Age-H > Age-M, HS > C, Income-L > Income-H, Miles-L > Miles-M, Miles-L > Miles-H			

**Table 7.3: Summary of Data on Each of the 41 Performance Items (cont.)**

**Item 40 - Providing pedestrian or bicycle pathways on or near highways**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction	2.08	1.99	2.10	2.12
Significant subgroup differences	Age-H > Age-M, HS > C, Income-L > Income-M, Income-M > Income-H			
Future Attention	2.71	2.81	2.72	2.65
Significant subgroup differences	Females > Males, Income-L > Income-M, Income-L > Income-H, Miles-L > Miles-H			
Discrepancy	-.67	-.85	-.69	-.56
T-test (Current Satisfaction vs. Future Attention)	*	*	*	*
Significant subgroup differences	Males > Females, HS > C			

**Item 41 - Providing light rail routes, such as MetroLink, that meet your needs (St. Louis only).**

	Total	Kansas City	St. Louis	Remainder of the State
Current Satisfaction			2.49	
Significant subgroup differences	HS > C			
Future Attention			3.12	
Significant subgroup differences	None			
Discrepancy			-.68	
T-test (Current Satisfaction vs. Future Attention)			*	
Significant subgroup differences	HS > C			

**Table 7.4: Summary of Significant Differences in Current Satisfaction by Performance Item for Each Subgroup**

Item #	Item	Region	Gender	Age	Education	Income	Miles Driven	Comm. Driver
1	Placing orange construction signs to mark active work areas	*						
2	Ensuring that traffic signals and lights are working	*						
3	Marking railroad crossings	*						
4	Providing rest area services and facilities that meet my needs				*	*	*	
5	Placing yellow warning signs to assure sufficient response time	*						
6	Providing a sufficient number of local/regional airports			*	*	*	*	
7	Setting speed limits		*			*	*	
8	Using electronic message boards to advise drivers of delays or construction areas	*						
9	Providing lanes that are wide enough for safe driving	*	*					
10	Having signs that can be easily seen at night or in bad weather	*	*					
11	Building bridges that are wide enough to feel safe	*						
12	Building bridges that last long enough	*						
13	Mowing along roadways to improve the appearance of the roadway				*	*		

\* Statistically significant at the  $p < .01$  level. See Table 7.3 for more detail on the direction of the difference.

**Table 7.4: Summary of Significant Differences in Current Satisfaction by Performance Item for Each Subgroup (cont.)**

Item #	Item	Region	Gender	Age	Education	Income	Miles Driven	Comm. Driver
14	Removing snow / ice efficiently	*		*				
15	Communicating with the public in easy to understand language							
16	Keeping roadsides free of litter and debris	*			*	*		
17	Providing useful information about construction, repairs or road conditions							
18	Striping center lines and road edges to ensure safety							
19	Lighting interchanges and bridges		*					
20	Providing a sufficient number of commuter parking spaces	*	*	*	*	*	*	
21	Offering a toll free phone line that is useful		*		*	*	*	
22	Providing sufficient passing opportunities on two-lane highways		*					
23	Providing crosswalks and signals that allow you to cross the highway safely	*	*		*			
24	Providing pavement markings that can be easily seen in wet weather			*				
25	Building new highways to meet future demand							
26	Treating highway surfaces to resist skidding in wet weather			*				
27	Honoring commitments to provide and maintain Missouri's transportation system	*		*	*			

\* Statistically significant at the  $p < .01$  level. See Table 7.3 for more detail on the direction of the difference.

**Table 7.4: Summary of Significant Differences in Current Satisfaction by Performance Item for Each Subgroup (cont.)**

Item #	Item	Region	Gender	Age	Education	Income	Miles Driven	Comm. Driver
28	Providing shoulders that are adequate to pull off the road safely	*						
29	Providing sufficient transportation for those who don't or can't drive		*				*	
30	Improving existing highways to meet increasing traffic demands		*	*				
31	Providing Amtrak passenger rail service to meet your needs		*	*		*	*	
32	Planning a project in a reasonable amount of time			*				
33	Completing road and bridge construction and repairs in a timely manner	*		*	*		*	
34	Providing the public with adequate opportunities for input in project planning	*						
35	Distributing transportation funds fairly to all areas of the state	*						
36	Using public funds in a cost effective manner			*	*	*		
37	Providing pavement that lasts a long time	*				*	*	
38	Maintaining the pavement so it provides a smooth ride			*				
39	Repairing pavement surface promptly	*		*	*	*	*	
40	Providing pedestrian / bicycle pathways on or adjacent to highways that are safe.		*			*	*	
41	Providing passenger light rail routes, such as Metro link (St. Louis)							

\* Statistically significant at the  $p < .01$  level. See Table 7.3 for more detail on the direction of the difference.

**Table 7.1: Summary of Significant Differences for Future Attention by Performance Item for Each Subgroup**

Item #	Item	Region	Gender	Age	Education	Income	Miles Driven	Comm. Driver
1	Placing orange construction signs to mark active work areas							
2	Ensuring that traffic signals and lights are working							
3	Marking railroad crossings							
4	Providing rest area services and facilities that meet my needs				*	*	*	
5	Placing yellow warning signs to assure sufficient response time							
6	Providing a sufficient number of local/regional airports				*	*	*	
7	Setting speed limits		*			*		
8	Using electronic message boards to advise drivers of delays or construction areas							
9	Providing lanes that are wide enough for safe driving		*					
10	Having signs that can be easily seen at night or in bad weather	*	*					
11	Building bridges that are wide enough to feel safe							
12	Building bridges that last long enough							
13	Mowing along roadways to improve the appearance of the roadway				*	*		

\* Statistically significant at the p<.01 level. See Table 7.3 for more detail on the direction of the difference

**Table 7.5: Summary of Significant Differences for Future Attention by Performance Item for Each Subgroup (cont.)**

Item #	Item	Region	Gender	Age	Education	Income	Miles Driven	Comm. Driver
14	Removing snow / ice efficiently			*				
15	Communicating with the public in easy to understand language							
16	Keeping roadsides free of litter and debris				*	*		
17	Providing useful information about construction, repairs or road conditions							
18	Striping center lines and road edges to ensure safety							
19	Lighting interchanges and bridges		*					
20	Providing a sufficient number of commuter parking spaces	*	*	*	*	*	*	
21	Offering a toll free phone line that is useful		*		*	*	*	
22	Providing sufficient passing opportunities on two-lane highways		*					
23	Providing crosswalks and signals that allow you to cross the highway safely		*		*			
24	Providing pavement markings that can be easily seen in wet weather							
25	Building new highways to meet future demand							
26	Treating highway surfaces to resist skidding in wet weather							
27	Honoring commitments to provide and maintain Missouri's transportation system			*	*			

**Table 7.5: Summary of Significant Differences for Future Attention by Performance Item for Each Subgroup (cont.)**

Item #	Item	Region	Gender	Age	Education	Income	Miles Driven	Comm. Driver
28	Providing shoulders that are adequate to pull off the road safely							
29	Providing sufficient transportation for those who don't or can't drive	*	*				*	
30	Improving existing highways to meet increasing traffic demands		*	*				
31	Providing Amtrak passenger rail service to meet your needs	*	*	*		*		
32	Planning a project in a reasonable amount of time			*				
33	Completing road and bridge construction and repairs in a timely manner			*	*		*	
34	Providing the public with adequate opportunities for input in project planning							
35	Distributing transportation funds fairly to all areas of the state							
36	Using public funds in a cost effective manner			*	*	*		
37	Providing pavement that lasts a long time					*	*	
38	Maintaining the pavement so it provides a smooth ride			*				
39	Repairing pavement surface promptly			*	*		*	
40	Providing pedestrian / bicycle pathways on or adjacent to highways that are safe.		*			*	*	
41	Providing passenger light rail routes, such as Metro link (St. Louis)							

\* Statistically significant at the  $p < .01$  level. See *Table 7.3* for more detail on the direction of the difference.

**Table 7.1: Summary of Significant Discrepancy Differences by Performance Item for Each Subgroup**

Item #	Item	Region	Gender	Age	Education	Income	Miles Driven	Comm. Driver
1	Placing orange construction signs to mark active work areas	*						
2	Ensuring that traffic signals and lights are working	*						
3	Marking railroad crossings	*	*	*				
4	Providing rest area services and facilities that meet my needs				*			
5	Placing yellow warning signs to assure sufficient response time	*						
6	Providing a sufficient number of local/regional airports		*	*				
7	Setting speed limits			*			*	
8	Using electronic message boards to advise drivers of delays or construction areas			*				
9	Providing lanes that are wide enough for safe driving							
10	Having signs that can be easily seen at night or in bad weather	*						
11	Building bridges that are wide enough to feel safe							
12	Building bridges that last long enough	*			*	*		
13	Mowing along roadways to improve the appearance of the roadway			*	*			

\* Statistically significant at the  $p < .01$  level. See *Table 7.3* for more detail on the direction of the difference.

**Table 7.6: Summary of Significant Discrepancy Differences by Performance Item for Each Subgroup (cont.)**

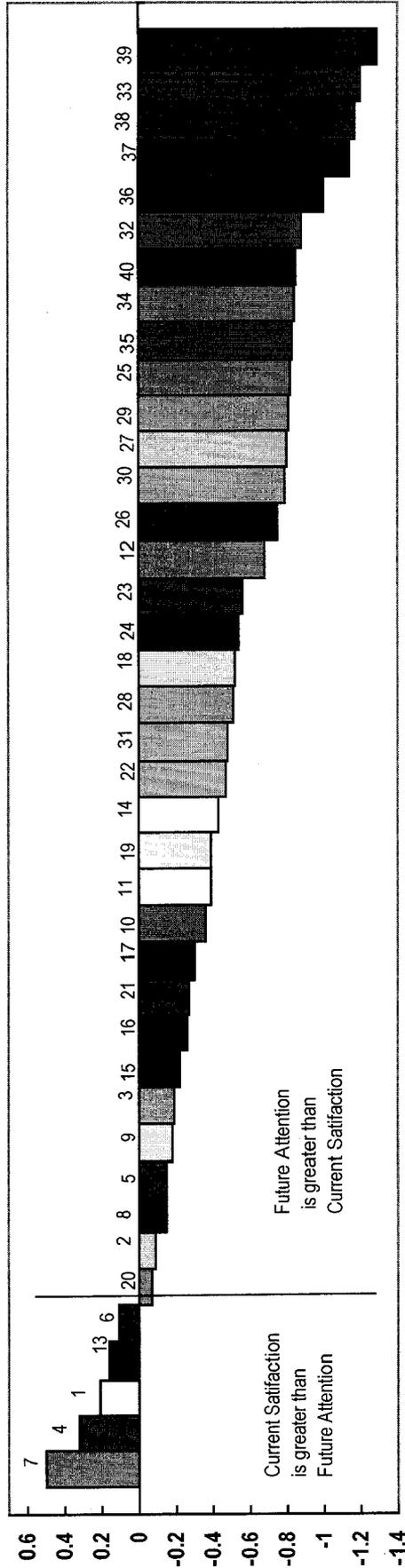
Item #	Item	Region	Gender	Age	Education	Income	Miles Driven	Comm. Driver
14	Removing snow and ice efficiently	*		*				
15	Communicating with the public in easy to understand language			*				
16	Keeping roadsides free of litter and debris	*			*			
17	Providing useful information about construction, repairs or road conditions			*				
18	Striping center lines and road edges to ensure safety			*				
19	Lighting interchanges and bridges							
20	Providing a sufficient number of commuter parking spaces	*	*			*	*	
21	Offering a toll free phone line that is useful	*						
22	Providing sufficient passing opportunities on two-lane highways			*				
23	Providing crosswalks and signals that allow you to cross the highway safely	*	*				*	
24	Providing pavement markings that can be easily seen in wet weather			*	*	*	*	
25	Building new highways to meet future demand	*		*	*			
26	Treating highway surfaces to resist skidding in wet weather	*		*	*			
27	Honoring commitments to provide and maintain Missouri's transportation system			*	*	*	*	

**Table 7.6: Summary of Significant Discrepancy Differences by Performance Item for Each Subgroup (cont.)**

Item #	Item	Region	Gender	Age	Education	Income	Miles Driven	Comm. Driver
28	Providing shoulders that are adequate to pull off the road safely	*						
29	Providing sufficient transportation for those who don't or can't drive	*	*	*	*			
30	Improving existing highways to meet increasing traffic demands			*	*	*	*	
31	Providing Amtrak passenger rail service to meet your needs			*	*			
32	Planning a project in a reasonable amount of time			*	*	*	*	*
33	Completing road and bridge construction and repairs in a timely manner	*		*	*	*	*	
34	Providing the public with adequate opportunities for input in project planning				*			
35	Distributing transportation funds fairly to all areas of the state	*			*			
36	Using public funds in a cost effective manner			*	*	*	*	
37	Providing pavement that lasts a long time			*	*	*	*	
38	Maintaining the pavement so it provides a smooth ride			*	*	*		
39	Repairing pavement surface promptly	*		*	*	*	*	
40	Providing pedestrian / bicycle pathways on or adjacent to highways that are safe.		*		*			
41	Providing passenger light rail routes, such as Metro link (St. Louis)				*			

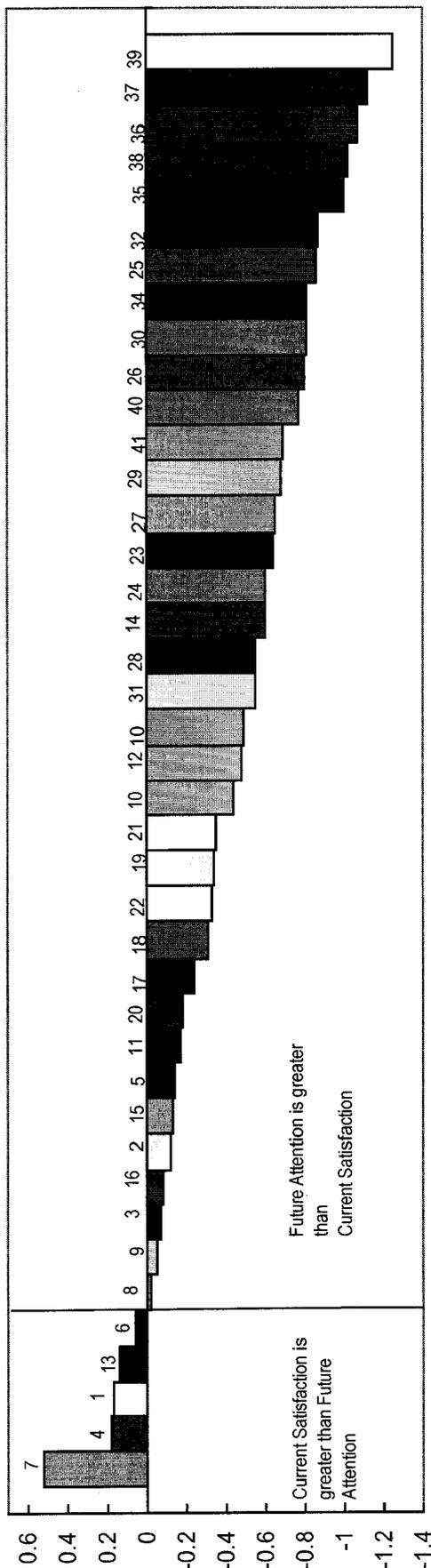
\* Statistically significant at the  $p < .01$  level. See Table 7.3 for more detail on the direction of the difference.

**Figure 7.1: Mean Discrepancies between Current Satisfaction and Future Attention - Kansas City Region**



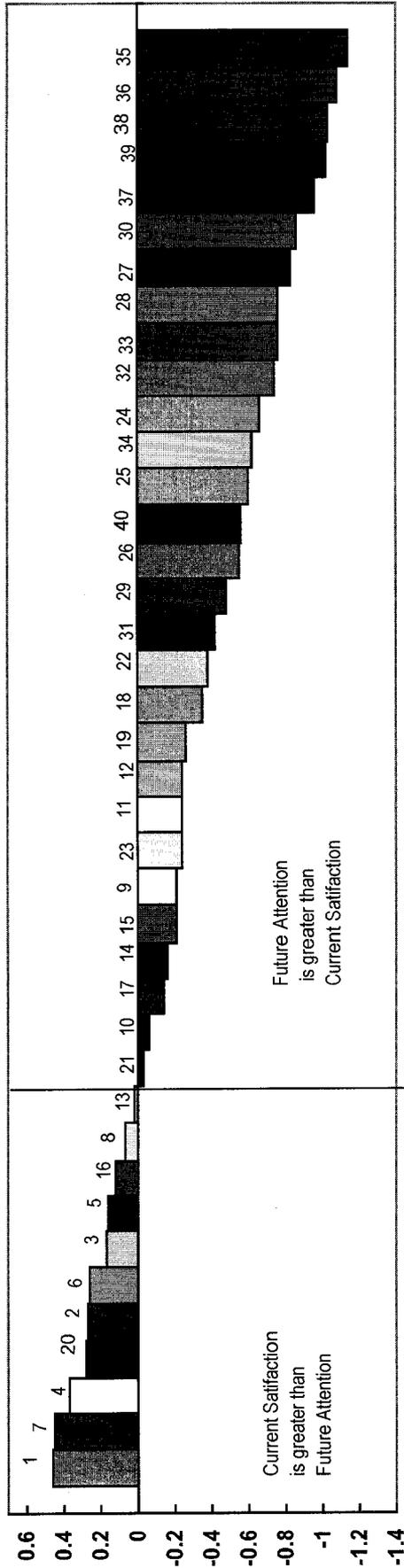
1. Placing orange construction signs to mark active work areas
2. Ensuring that traffic signals and lights are working
3. Marking railroad crossings
4. Providing rest area services and facilities that meet my needs
5. Placing yellow warning signs to assure sufficient response time
6. Providing a sufficient number of local/regional airports
7. Setting speed limits
8. Using electronic message boards to advise drivers of delays or construction areas.
9. Providing lanes that are wide enough for safe driving
10. Having signs that can be easily seen at night or in bad weather
11. Building bridges that are wide enough to feel safe
12. Building bridges that last long enough
13. Mowing along roadways to improve the appearance of the roadway
14. Removing snow / ice efficiently
15. Communicating with the public in easy to understand language
16. Keeping roadsides free of litter and debris
17. Providing useful information about construction, repairs or road conditions
18. Striping center lines and road edges to ensure safety
19. Lighting interchanges and bridges
20. Providing a sufficient number of commuter parking spaces
21. Offering a toll free phone line that is useful
22. Providing sufficient passing opportunities on two-lane highways
23. Providing crosswalks and signals that allow you to cross the highway safely
24. Providing pavement markings that can be easily seen in wet weather
25. Building new highways to meet future demand
26. Treating highway surfaces to resist skidding in wet weather
27. Honoring commitments to provide and maintain Missouri's transportation system
28. Providing shoulders that are adequate to pull off the road safely
29. Providing sufficient transportation for those who don't or can't drive
30. Improving existing highways to meet increasing traffic demands
31. Providing Amtrak passenger rail service to meet your needs
32. Planning a project in a reasonable amount of time
33. Completing road and bridge construction and repairs in a timely manner
34. Providing the public with adequate opportunities for input in project planning
35. Distributing transportation funds fairly to all areas of the state
36. Using public funds in a cost effective manner
37. Providing pavement that lasts a long time
38. Maintaining the pavement so it provides a smooth ride
39. Repairing pavement surface promptly
40. Providing pedestrian / bicycle pathways on or adjacent to highways that are safe.
41. Provide light rail such as MetroLink (St. Louis only).

**Figure 7.2: Mean Discrepancies between Current Satisfaction and Future Attention - St. Louis Region**



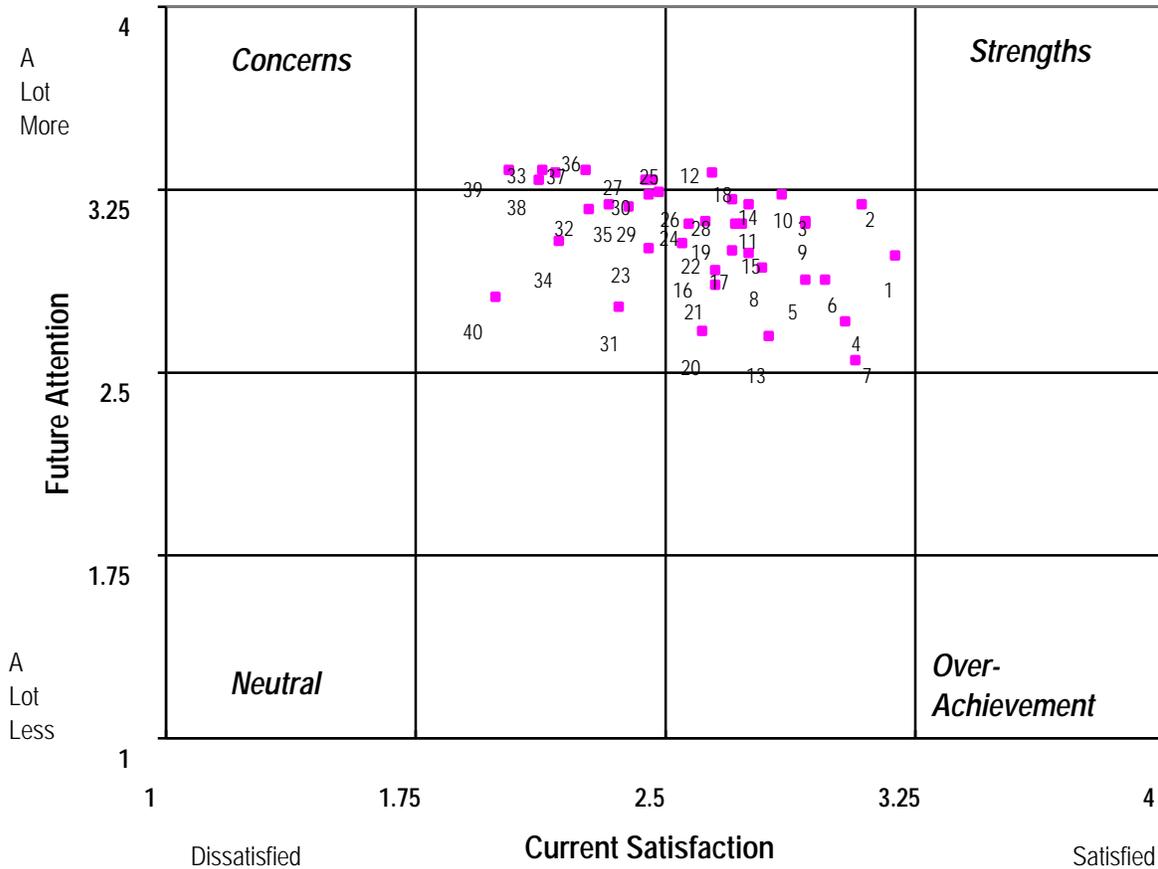
1. Placing orange construction signs to mark active work areas
2. Ensuring that traffic signals and lights are working
3. Marking railroad crossings
4. Providing rest area services and facilities that meet my needs
5. Placing yellow warning signs to assure sufficient response time
6. Providing a sufficient number of local/regional airports
7. Setting speed limits
8. Using electronic message boards to advise drivers of delays or construction areas.
9. Providing lanes that are wide enough for safe driving
10. Having signs that can be easily seen at night or in bad weather
11. Building bridges that are wide enough to feel safe
12. Building bridges that last long enough
13. Mowing along roadways to improve the appearance of the roadway
14. Removing snow / ice efficiently
15. Communicating with the public in easy to understand language
16. Keeping roadsides free of litter and debris
17. Providing useful information about construction, repairs or road conditions
18. Striping center lines and road edges to ensure safety
19. Lighting interchanges and bridges
20. Providing a sufficient number of commuter parking spaces
21. Offering a toll free phone line that is useful
22. Providing sufficient passing opportunities on two-lane highways
23. Providing crosswalks and signals that allow you to cross the highway safely
24. Providing pavement markings that can be easily seen in wet weather
25. Building new highways to meet future demand
26. Treating highway surfaces to resist skidding in wet weather
27. Honoring commitments to provide and maintain Missouri's transportation system
28. Providing shoulders that are adequate to pull off the road safely
29. Providing sufficient transportation for those who don't or can't drive
30. Improving existing highways to meet increasing traffic demands
31. Providing Amtrak passenger rail service to meet your needs
32. Planning a project in a reasonable amount of time
33. Completing road and bridge construction and repairs in a timely manner
34. Providing the public with adequate opportunities for input in project planning
35. Distributing transportation funds fairly to all areas of the state
36. Using public funds in a cost effective manner
37. Providing pavement that lasts a long time
38. Maintaining the pavement so it provides a smooth ride
39. Repairing pavement surface promptly
40. Providing pedestrian / bicycle pathways on or adjacent to highways that are safe.
41. Provide light rail such as MetroLink (St. Louis only).

**Figure 7.3: Mean Discrepancies between Current Satisfaction and Future Attention – Remainder of the State Region**



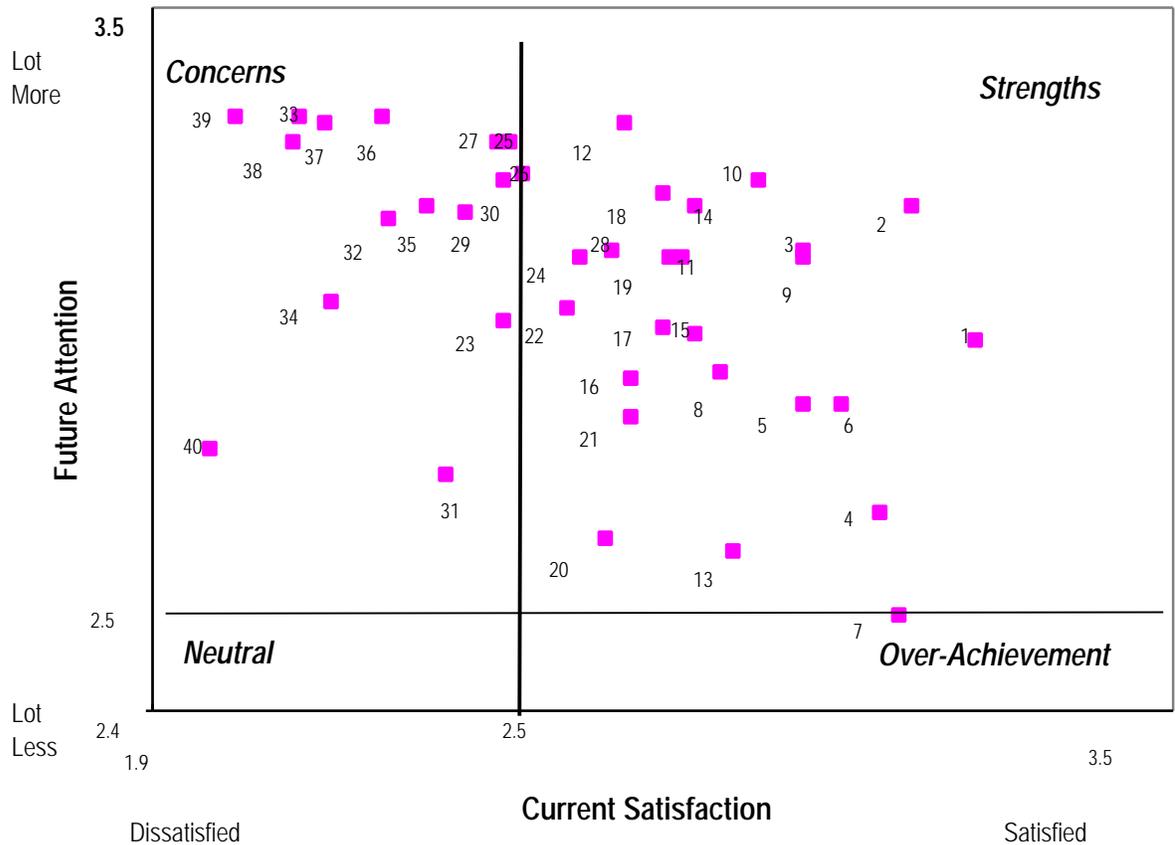
- |  |  |  |
|--|--|--|
| <ol style="list-style-type: none"> <li>1. Placing orange construction signs to mark active work areas</li> <li>2. Ensuring that traffic signals and lights are working</li> <li>3. Marking railroad crossings</li> <li>4. Providing rest area services and facilities that meet my needs</li> <li>5. Placing yellow warning signs to assure sufficient response time</li> <li>6. Providing a sufficient number of local/regional airports</li> <li>7. Setting speed limits</li> <li>8. Using electronic message boards to advise drivers of delays or construction areas.</li> <li>9. Providing lanes that are wide enough for safe driving</li> <li>10. Having signs that can be easily seen at night or in bad weather</li> <li>11. Building bridges that are wide enough to feel safe</li> <li>12. Building bridges that last long enough</li> <li>13. Mowing along roadways to improve the appearance of the roadway</li> <li>14. Removing snow / ice efficiently</li> <li>15. Communicating with the public in easy to understand language</li> </ol> | <ol style="list-style-type: none"> <li>16. Keeping roadsides free of litter and debris</li> <li>17. Providing useful information about construction, repairs or road conditions</li> <li>18. Striping center lines and road edges to ensure safety</li> <li>19. Lighting interchanges and bridges</li> <li>20. Providing a sufficient number of commuter parking spaces</li> <li>21. Offering a toll free phone line that is useful</li> <li>22. Providing sufficient passing opportunities on two-lane highways</li> <li>23. Providing crosswalks and signals that allow you to cross the highway safely</li> <li>24. Providing pavement markings that can be easily seen in wet weather</li> <li>25. Building new highways to meet future demand</li> <li>26. Treating highway surfaces to resist skidding in wet weather</li> <li>27. Honoring commitments to provide and maintain Missouri's transportation system</li> <li>28. Providing shoulders that are adequate to pull off the road safely</li> </ol> | <ol style="list-style-type: none"> <li>29. Providing sufficient transportation for those who don't or can't drive</li> <li>30. Improving existing highways to meet increasing traffic demands</li> <li>31. Providing Amtrak passenger rail service to meet your needs</li> <li>32. Planning a project in a reasonable amount of time</li> <li>33. Completing road and bridge construction and repairs in a timely manner</li> <li>34. Providing the public with adequate opportunities for input in project planning</li> <li>35. Distributing transportation funds fairly to all areas of the state</li> <li>36. Using public funds in a cost effective manner</li> <li>37. Providing pavement that lasts a long time</li> <li>38. Maintaining the pavement so it provides a smooth ride</li> <li>39. Repairing pavement surface promptly</li> <li>40. Providing pedestrian / bicycle pathways on or adjacent to highways that are safe.</li> <li>41. Provide light rail such as Metrolink (St. Louis only).</li> </ol> |
|--|--|--|

**Figure 7.4: Relative Plotting Current Satisfaction and Future Attention - Kansas City Region**



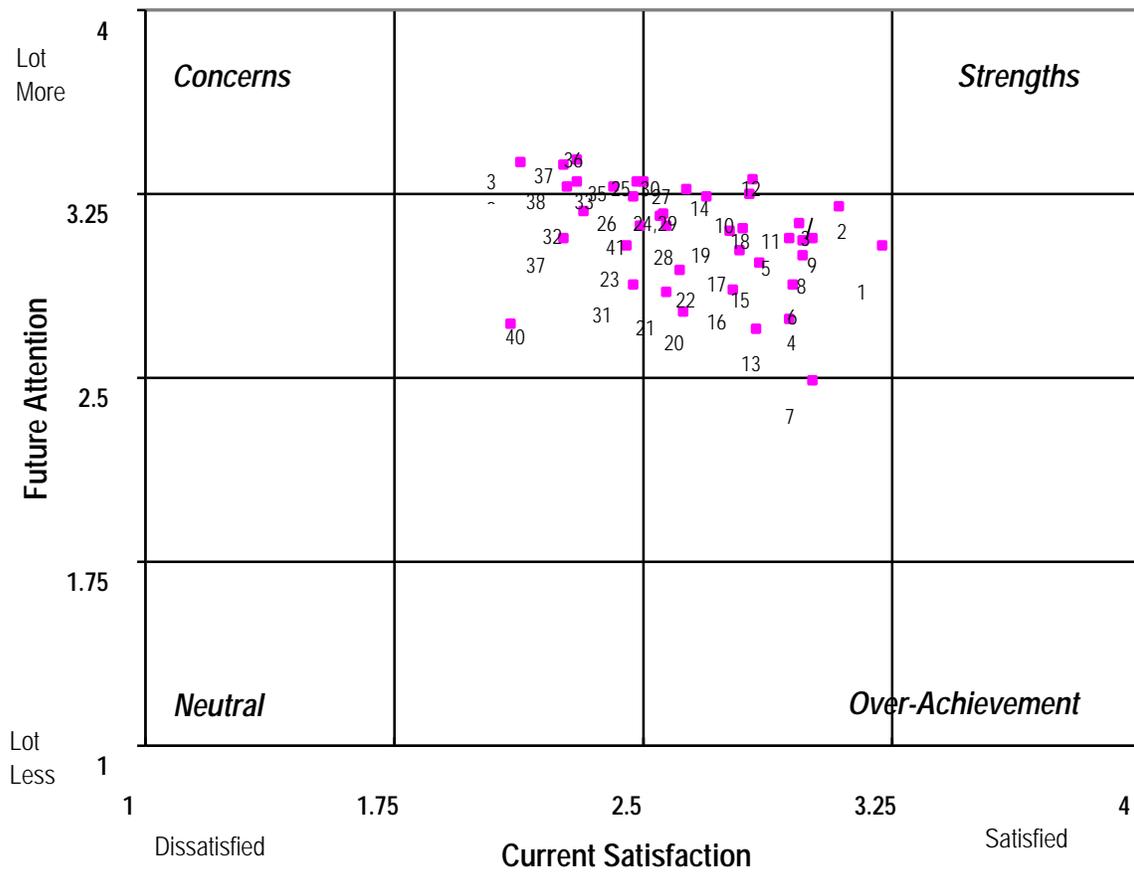
- |  |  |  |
|--|--|--|
| <ol style="list-style-type: none"> <li>1. Placing orange construction signs to mark active work areas</li> <li>2. Ensuring that traffic signals and lights are working</li> <li>3. Marking railroad crossings</li> <li>4. Providing rest area services and facilities that meet my needs</li> <li>5. Placing yellow warning signs to assure sufficient response time</li> <li>6. Providing a sufficient number of local/regional airports</li> <li>7. Setting speed limits</li> <li>8. Using electronic message boards to advise drivers of delays or construction areas.</li> <li>9. Providing lanes that are wide enough for safe driving</li> <li>10. Having signs that can be easily seen at night or in bad weather</li> <li>11. Building bridges that are wide enough to feel safe</li> <li>12. Building bridges that last long enough</li> <li>13. Mowing along roadways to improve the appearance of the roadway</li> <li>14. Removing snow / ice efficiently</li> </ol> | <ol style="list-style-type: none"> <li>15. Communicating with the public in easy to understand language</li> <li>16. Keeping roadsides free of litter and debris</li> <li>17. Providing useful information about construction, repairs or road conditions</li> <li>18. Striping center lines and road edges to ensure safety</li> <li>19. Lighting interchanges and bridges</li> <li>20. Providing a sufficient number of commuter parking spaces</li> <li>21. Offering a toll free phone line that is useful</li> <li>22. Providing sufficient passing opportunities on two-lane highways</li> <li>23. Providing crosswalks and signals that allow you to cross the highway safely</li> <li>24. Providing pavement markings that can be easily seen in wet weather</li> <li>25. Building new highways to meet future demand</li> <li>26. Treating highway surfaces to resist skidding in wet weather</li> <li>27. Honoring commitments to provide and maintain Missouri's transportation system</li> <li>28. Providing shoulders that are adequate to pull off the road safely</li> </ol> | <ol style="list-style-type: none"> <li>29. Providing sufficient transportation for those who don't or can't drive</li> <li>30. Improving existing highways to meet increasing traffic demands</li> <li>31. Providing Amtrak passenger rail service to meet your needs</li> <li>32. Planning a project in a reasonable amount of time</li> <li>33. Completing road and bridge construction and repairs in a timely manner</li> <li>34. Providing the public with adequate opportunities for input in project planning</li> <li>35. Distributing transportation funds fairly to all areas of the state</li> <li>36. Using public funds in a cost effective manner</li> <li>37. Providing pavement that lasts a long time</li> <li>38. Maintaining the pavement so it provides a smooth ride</li> <li>39. Repairing pavement surface promptly</li> <li>40. Providing pedestrian / bicycle pathways on or adjacent to highways that are safe.</li> <li>41. Provide light rail such as MetroLink (St. Louis only).</li> </ol> |
|--|--|--|

**Figure 7.5: Enhanced Plotting Current Satisfaction and Future Attention - Kansas City Region**



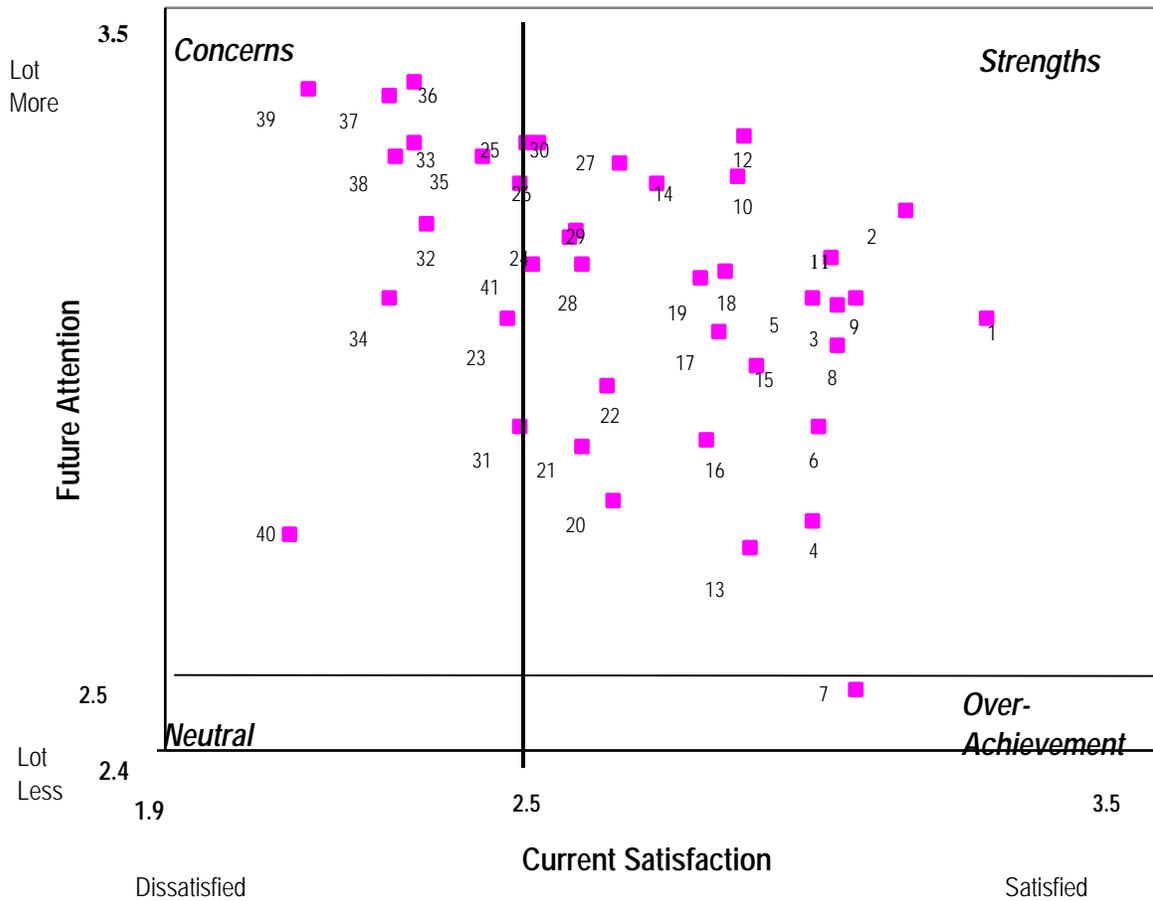
- |  |  |  |
|--|--|--|
| <ol style="list-style-type: none"> <li>1. Placing orange construction signs to mark active work areas</li> <li>2. Ensuring that traffic signals and lights are working</li> <li>3. Marking railroad crossings</li> <li>4. Providing rest area services and facilities that meet my needs</li> <li>5. Placing yellow warning signs to assure sufficient response time</li> <li>6. Providing a sufficient number of local/regional airports</li> <li>7. Setting speed limits</li> <li>8. Using electronic message boards to advise drivers of delays or construction areas.</li> <li>9. Providing lanes that are wide enough for safe driving</li> <li>10. Having signs that can be easily seen at night or in bad weather</li> <li>11. Building bridges that are wide enough to feel safe</li> <li>12. Building bridges that last long enough</li> <li>13. Mowing along roadways to improve the appearance of the roadway</li> <li>14. Removing snow / ice efficiently</li> </ol> | <ol style="list-style-type: none"> <li>15. Communicating with the public in easy to understand language</li> <li>16. Keeping roadsides free of litter and debris</li> <li>17. Providing useful information about construction, repairs or road conditions</li> <li>18. Striping center lines and road edges to ensure safety</li> <li>19. Lighting interchanges and bridges</li> <li>20. Providing a sufficient number of commuter parking spaces</li> <li>21. Offering a toll free phone line that is useful</li> <li>22. Providing sufficient passing opportunities on two-lane highways</li> <li>23. Providing crosswalks and signals that allow you to cross the highway safely</li> <li>24. Providing pavement markings that can be easily seen in wet weather</li> <li>25. Building new highways to meet future demand</li> <li>26. Treating highway surfaces to resist skidding in wet weather</li> <li>27. Honoring commitments to provide and maintain Missouri's transportation system</li> <li>28. Providing shoulders that are adequate to pull off the road safely</li> </ol> | <ol style="list-style-type: none"> <li>29. Providing sufficient transportation for those who don't or can't drive</li> <li>30. Improving existing highways to meet increasing traffic demands</li> <li>31. Providing Amtrak passenger rail service to meet your needs</li> <li>32. Planning a project in a reasonable amount of time</li> <li>33. Completing road and bridge construction and repairs in a timely manner</li> <li>34. Providing the public with adequate opportunities for input in project planning</li> <li>35. Distributing transportation funds fairly to all areas of the state</li> <li>36. Using public funds in a cost effective manner</li> <li>37. Providing pavement that lasts a long time</li> <li>38. Maintaining the pavement so it provides a smooth ride</li> <li>39. Repairing pavement surface promptly</li> <li>40. Providing pedestrian / bicycle pathways on or adjacent to highways that are safe.</li> <li>41. Provide light rail such as MetroLink (St. Louis only).</li> </ol> |
|--|--|--|

Figure 7.6: Relative Plotting Current Satisfaction and Future Attention - St. Louis Area Region



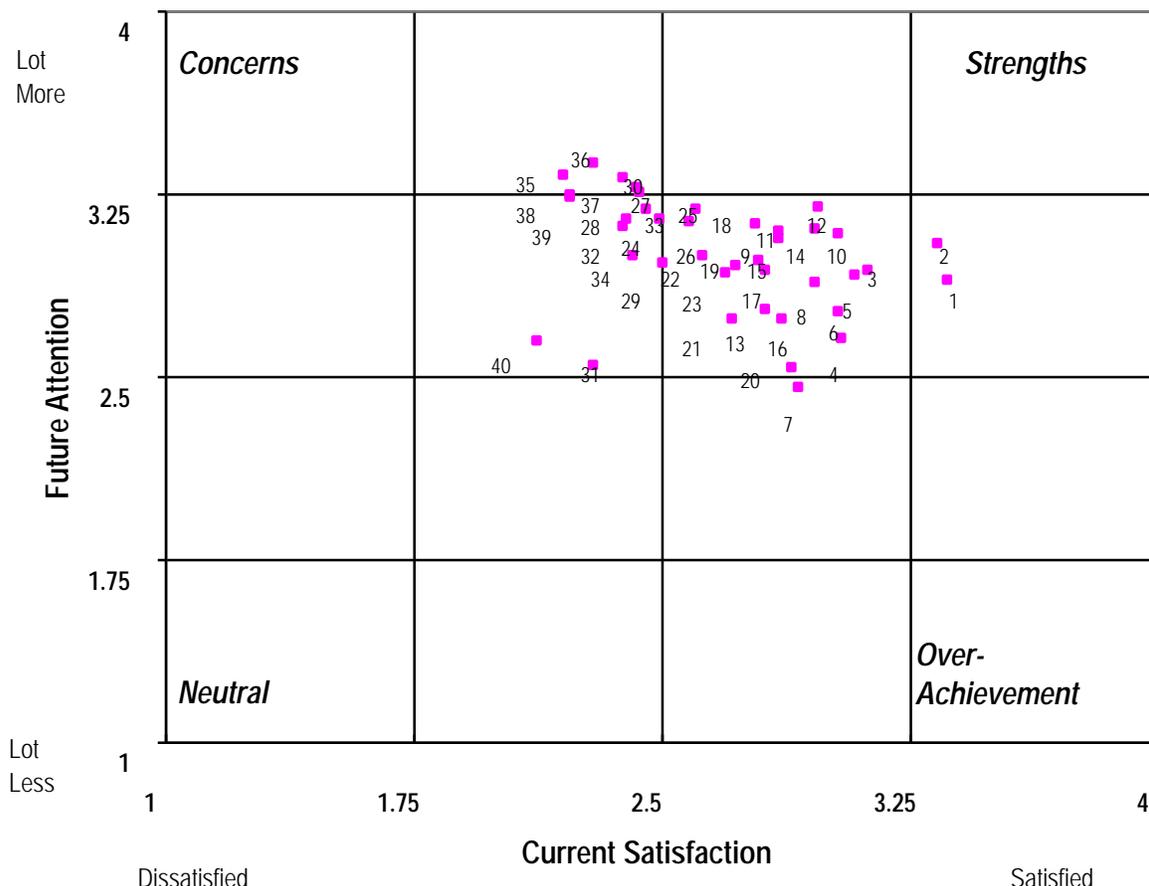
- |   |   |   |
|---|---|---|
| 1. Placing orange construction signs to mark active work areas                        | 15. Communicating with the public in easy to understand language                  | 29. Providing sufficient transportation for those who don't or can't drive            |
| 2. Ensuring that traffic signals and lights are working                               | 16. Keeping roadsides free of litter and debris                                   | 30. Improving existing highways to meet increasing traffic demands                    |
| 3. Marking railroad crossings   | 17. Providing useful information about construction, repairs or road conditions   | 31. Providing Amtrak passenger rail service to meet your needs                        |
| 4. Providing rest area services and facilities that meet my needs                     | 18. Striping center lines and road edges to ensure safety                         | 32. Planning a project in a reasonable amount of time                                 |
| 5. Placing yellow warning signs to assure sufficient response time                    | 19. Lighting interchanges and bridges   | 33. Completing road and bridge construction and repairs in a timely manner            |
| 6. Providing a sufficient number of local/regional airports                           | 20. Providing a sufficient number of commuter parking spaces                      | 34. Providing the public with adequate opportunities for input in project planning    |
| 7. Setting speed limits   | 21. Offering a toll free phone line that is useful                                | 35. Distributing transportation funds fairly to all areas of the state                |
| 8. Using electronic message boards to advise drivers of delays or construction areas. | 22. Providing sufficient passing opportunities on two-lane highways               | 36. Using public funds in a cost effective manner                                     |
| 9. Providing lanes that are wide enough for safe driving                              | 23. Providing crosswalks and signals that allow you to cross the highway safely   | 37. Providing pavement that lasts a long time   |
| 10. Having signs that can be easily seen at night or in bad weather                   | 24. Providing pavement markings that can be easily seen in wet weather            | 38. Maintaining the pavement so it provides a smooth ride                             |
| 11. Building bridges that are wide enough to feel safe                                | 25. Building new highways to meet future demand                                   | 39. Repairing pavement surface promptly   |
| 12. Building bridges that last long enough  | 26. Treating highway surfaces to resist skidding in wet weather                   | 40. Providing pedestrian / bicycle pathways on or adjacent to highways that are safe. |
| 13. Mowing along roadways to improve the appearance of the roadway                    | 27. Honoring commitments to provide and maintain Missouri's transportation system | 41. Provide light rail such as MetroLink (St. Louis only).                            |
| 14. Removing snow / ice efficiently   | 28. Providing shoulders that are adequate to pull off the road safely             |   |

Figure 7.7: Enhanced Plotting Current Satisfaction and Future Attention - St. Louis Region



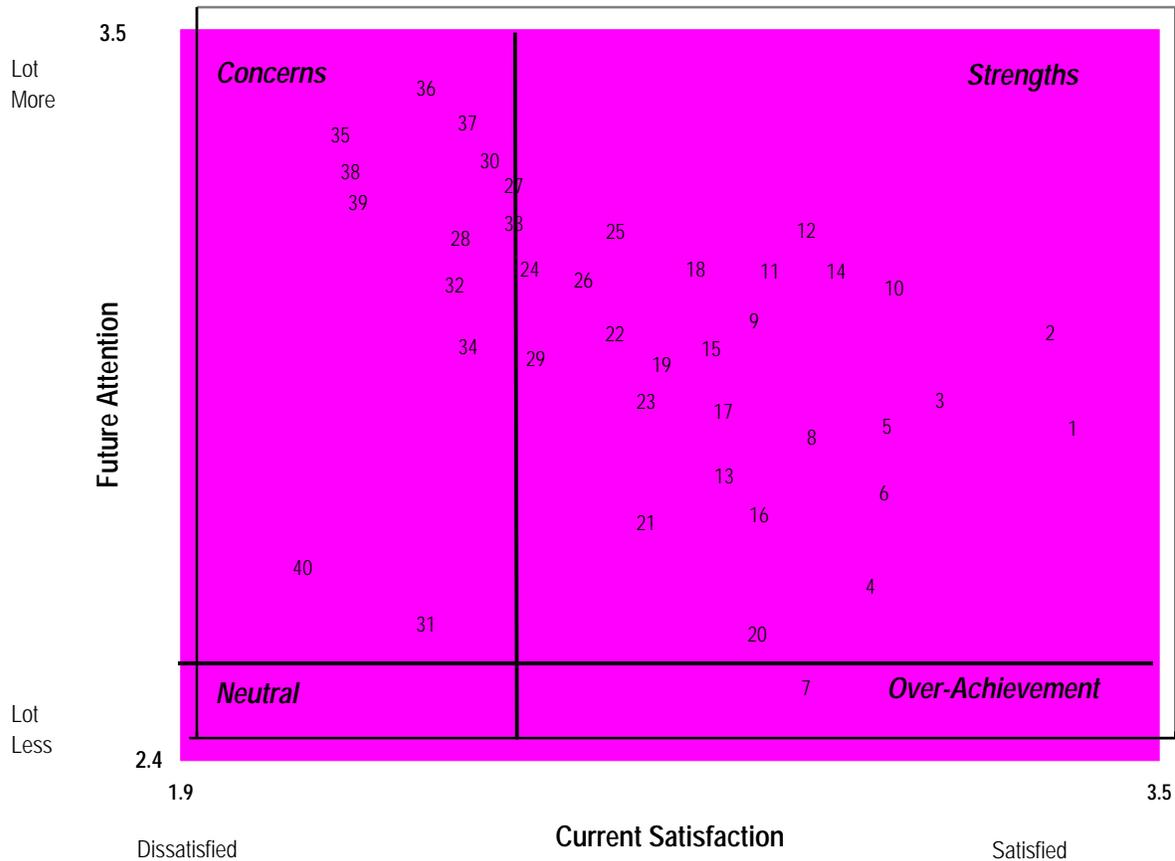
- |   |   |   |
|---|---|---|
| 1. Placing orange construction signs to mark active work areas                        | 15. Communicating with the public in easy to understand language                  | 29. Providing sufficient transportation for those who don't or can't drive            |
| 2. Ensuring that traffic signals and lights are working                               | 16. Keeping roadsides free of litter and debris                                   | 30. Improving existing highways to meet increasing traffic demands                    |
| 3. Marking railroad crossings   | 17. Providing useful information about construction, repairs or road conditions   | 31. Providing Amtrak passenger rail service to meet your needs                        |
| 4. Providing rest area services and facilities that meet my needs                     | 18. Striping center lines and road edges to ensure safety                         | 32. Planning a project in a reasonable amount of time                                 |
| 5. Placing yellow warning signs to assure sufficient response time                    | 19. Lighting interchanges and bridges   | 33. Completing road and bridge construction and repairs in a timely manner            |
| 6. Providing a sufficient number of local/regional airports                           | 20. Providing a sufficient number of commuter parking spaces                      | 34. Providing the public with adequate opportunities for input in project planning    |
| 7. Setting speed limits   | 21. Offering a toll free phone line that is useful                                | 35. Distributing transportation funds fairly to all areas of the state                |
| 8. Using electronic message boards to advise drivers of delays or construction areas. | 22. Providing sufficient passing opportunities on two-lane highways               | 36. Using public funds in a cost effective manner                                     |
| 9. Providing lanes that are wide enough for safe driving                              | 23. Providing crosswalks and signals that allow you to cross the highway safely   | 37. Providing pavement that lasts a long time   |
| 10. Having signs that can be easily seen at night or in bad weather                   | 24. Providing pavement markings that can be easily seen in wet weather            | 38. Maintaining the pavement so it provides a smooth ride                             |
| 11. Building bridges that are wide enough to feel safe                                | 25. Building new highways to meet future demand                                   | 39. Repairing pavement surface promptly   |
| 12. Building bridges that last long enough  | 26. Treating highway surfaces to resist skidding in wet weather                   | 40. Providing pedestrian / bicycle pathways on or adjacent to highways that are safe. |
| 13. Mowing along roadways to improve the appearance of the roadway                    | 27. Honoring commitments to provide and maintain Missouri's transportation system | 41. Provide light rail such as MetroLink (St. Louis only).                            |
| 14. Removing snow / ice efficiently   | 28. Providing shoulders that are adequate to pull off the road safely             |   |

**Figure 7.8: Relative Plotting Current Satisfaction and Future Attention - Remainder of the State Region**



- |   |   |   |
|---|---|---|
| 1. Placing orange construction signs to mark active work areas                        | 15. Communicating with the public in easy to understand language                  | 29. Providing sufficient transportation for those who don't or can't drive            |
| 2. Ensuring that traffic signals and lights are working                               | 16. Keeping roadsides free of litter and debris                                   | 30. Improving existing highways to meet increasing traffic demands                    |
| 3. Marking railroad crossings   | 17. Providing useful information about construction, repairs or road conditions   | 31. Providing Amtrak passenger rail service to meet your needs                        |
| 4. Providing rest area services and facilities that meet my needs                     | 18. Striping center lines and road edges to ensure safety                         | 32. Planning a project in a reasonable amount of time                                 |
| 5. Placing yellow warning signs to assure sufficient response time                    | 19. Lighting interchanges and bridges   | 33. Completing road and bridge construction and repairs in a timely manner            |
| 6. Providing a sufficient number of local/regional airports                           | 20. Providing a sufficient number of commuter parking spaces                      | 34. Providing the public with adequate opportunities for input in project planning    |
| 7. Setting speed limits   | 21. Offering a toll free phone line that is useful                                | 35. Distributing transportation funds fairly to all areas of the state                |
| 8. Using electronic message boards to advise drivers of delays or construction areas. | 22. Providing sufficient passing opportunities on two-lane highways               | 36. Using public funds in a cost effective manner                                     |
| 9. Providing lanes that are wide enough for safe driving                              | 23. Providing crosswalks and signals that allow you to cross the highway safely   | 37. Providing pavement that lasts a long time   |
| 10. Having signs that can be easily seen at night or in bad weather                   | 24. Providing pavement markings that can be easily seen in wet weather            | 38. Maintaining the pavement so it provides a smooth ride                             |
| 11. Building bridges that are wide enough to feel safe                                | 25. Building new highways to meet future demand                                   | 39. Repairing pavement surface promptly   |
| 12. Building bridges that last long enough  | 26. Treating highway surfaces to resist skidding in wet weather                   | 40. Providing pedestrian / bicycle pathways on or adjacent to highways that are safe. |
| 13. Mowing along roadways to improve the appearance of the roadway                    | 27. Honoring commitments to provide and maintain Missouri's transportation system | 41. Provide light rail such as MetroLink (St. Louis only).                            |
| 14. Removing snow / ice efficiently   | 28. Providing shoulders that are adequate to pull off the road safely             |   |

**Figure 7.9: Enhanced Plotting Current Satisfaction and Future Attention - Remainder of the State Region**



- |   |   |   |
|---|---|---|
| 1. Placing orange construction signs to mark active work areas                        | 15. Communicating with the public in easy to understand language                  | 29. Providing sufficient transportation for those who don't or can't drive            |
| 2. Ensuring that traffic signals and lights are working                               | 16. Keeping roadsides free of litter and debris                                   | 30. Improving existing highways to meet increasing traffic demands                    |
| 3. Marking railroad crossings   | 17. Providing useful information about construction, repairs or road conditions   | 31. Providing Amtrak passenger rail service to meet your needs                        |
| 4. Providing rest area services and facilities that meet my needs                     | 18. Striping center lines and road edges to ensure safety                         | 32. Planning a project in a reasonable amount of time                                 |
| 5. Placing yellow warning signs to assure sufficient response time                    | 19. Lighting interchanges and bridges   | 33. Completing road and bridge construction and repairs in a timely manner            |
| 6. Providing a sufficient number of local/regional airports                           | 20. Providing a sufficient number of commuter parking spaces                      | 34. Providing the public with adequate opportunities for input in project planning    |
| 7. Setting speed limits   | 21. Offering a toll free phone line that is useful                                | 35. Distributing transportation funds fairly to all areas of the state                |
| 8. Using electronic message boards to advise drivers of delays or construction areas. | 22. Providing sufficient passing opportunities on two-lane highways               | 36. Using public funds in a cost effective manner                                     |
| 9. Providing lanes that are wide enough for safe driving                              | 23. Providing crosswalks and signals that allow you to cross the highway safely   | 37. Providing pavement that lasts a long time   |
| 10. Having signs that can be easily seen at night or in bad weather                   | 24. Providing pavement markings that can be easily seen in wet weather            | 38. Maintaining the pavement so it provides a smooth ride                             |
| 11. Building bridges that are wide enough to feel safe                                | 25. Building new highways to meet future demand                                   | 39. Repairing pavement surface promptly   |
| 12. Building bridges that last long enough  | 26. Treating highway surfaces to resist skidding in wet weather                   | 40. Providing pedestrian / bicycle pathways on or adjacent to highways that are safe. |
| 13. Mowing along roadways to improve the appearance of the roadway                    | 27. Honoring commitments to provide and maintain Missouri's transportation system | 41. Provide light rail such as MetroLink (St. Louis only).                            |
| 14. Removing snow / ice efficiently   | 28. Providing shoulders that are adequate to pull off the road safely             |   |

### Listing of 41 Items Included in the Survey

Item #	Item
1	Placing orange construction signs to mark active work areas
2	Ensuring that traffic signals and lights are working
3	Marking railroad crossings
4	Providing rest area services and facilities that meet my needs
5	Placing yellow warning signs to assure sufficient response time
6	Providing a sufficient number of local / regional airports
7	Setting speed limits
8	Using electronic message boards to advise drivers of delays or construction areas
9	Providing lanes that are wide enough for safe driving
10	Having signs that can be easily seen at night or in bad weather
11	Building bridges that are wide enough to feel safe
12	Building bridges that last long enough
13	Mowing along roadways to improve the appearance of the roadway
14	Removing snow / ice efficiently
15	Communicating with the public in easy to understand language
16	Keeping roadsides free of litter and debris
17	Providing useful information about construction, repairs or road conditions
18	Striping center lines and road edges to ensure safety
19	Lighting interchanges and bridges
20	Providing a sufficient number of commuter parking spaces
21	Offering a toll free phone line that is useful
22	Providing sufficient passing opportunities on two-lane highways
23	Providing crosswalks and signals that allow you to cross the highway safely
24	Providing pavement markings that can be easily seen in wet weather
25	Building new highways to meet future demand
26	Treating highway surfaces to resist skidding in wet weather
27	Honoring commitments to provide and maintain Missouri's transportation system
28	Providing shoulders that are adequate to pull off the road safely
29	Providing sufficient transportation for those who don't or can't drive
30	Improving existing highways to meet increasing traffic demands
31	Providing Amtrak passenger rail service to meet your needs
32	Planning a project in a reasonable amount of time
33	Completing road and bridge construction and repairs in a timely manner
34	Providing the public with adequate opportunities for input in project planning
35	Distributing transportation funds fairly to all areas of the state
36	Using public funds in a cost effective manner
37	Providing pavement that lasts a long time
38	Maintaining the pavement so it provides a smooth ride
39	Repairing pavement surface promptly
40	Providing pedestrian / bicycle pathways on or adjacent to highways that are safe
41	Providing passenger light rail routes, such as Metro link (St. Louis)